User Guide

Personal Computer
VGC-RC110G Series

SONY

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Before Use

Congratulations on your purchase of this Sony VAIO® computer, and welcome to the on-screen User Guide. Sony has combined leading-edge technology in audio, video, computing, and communications to provide state-of-the-art personal computing.

Documentation

Your documentation includes printed information and user guides to read on your VAIO computer.

Printed Documentation

- **Welcome mat** — Contains an overview of connections, setting up information, etc.
- **Safety information** — Contains safety guidelines and owner information.

Non-printed Documentation

- **User Guide (this manual)** — Contains features of your computer. It also includes information about the software programs included with your computer, as well as information on solving common problems.
- **Specifications** — The online **Specifications** describe the hardware and software configuration of your VAIO computer.

  To view the online **Specifications**:

  1. Connect to the Internet.
  2. Go to the Sony online support Web site at http://www.sony.com/pcsupport for customers in USA, at http://www.sony.ca/support for customers in Canada, or at http://www.sony.com/lapcsupport for customers in Latin American countries or areas.
- **VAIO Recovery Guide** — Provides information about restoring individual software programs, software drivers, and drive partition(s) or your entire hard disk drive to the original factory installed settings.

  To access this online **VAIO Recovery Guide**:

  1. Click **Start**, point to **All Programs**, and click **VAIO Support Central**.
  2. Click **VAIO Documentation**.
  3. Click **VAIO Recovery Guide**.
- **RAID guide** — Provides an overview of RAID systems and the various RAID levels (or types) that can be configured with your VAIO computer. It lists detailed procedures for using the **RAID Recovery** program to configure the hard disk drives, change your computer's RAID array, or to remove the RAID configuration. Additional procedures are also provided for using the **VAIO Recovery** utility and the **Intel Storage Utility** programs.

  To access this online guide:

  1. Click **Start**, point to **All Programs**, and click **VAIO Support Central**.
  2. Click **VAIO Documentation**.
  3. Click **RAID guide**.

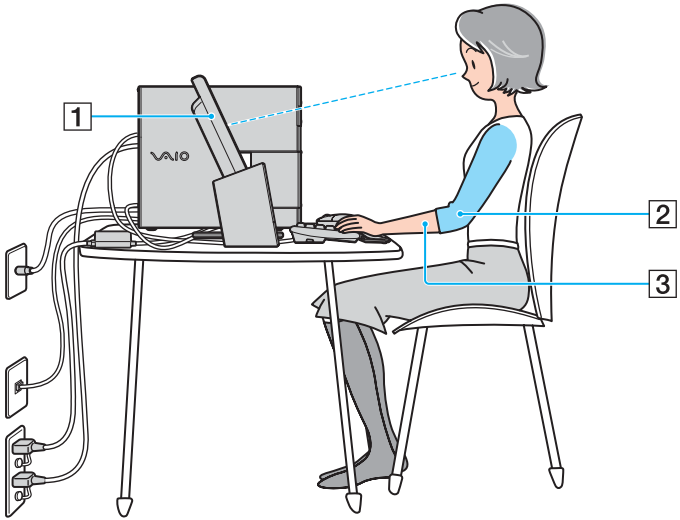
- **MCE guide** (MCE models only) — Provides information about using the Windows XP Media Center Edition operating system.

  To access this online **MCE guide**:

  1. Click **Start**, point to **All Programs**, and click **VAIO Support Central**.
  2. Click **VAIO Documentation**.
  3. Click **MCE guide**.

Ergonomic Considerations

Whenever possible, you should attempt to take account of the following ergonomic considerations:



- **Stable work surface** — Use a stable work surface large enough to support the computer and other peripheral equipment.
- **Ventilation** – Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
- **Position of your computer** – Place the display directly in front of you (1). Keep your forearms horizontal (2), with your wrists in a neutral, comfortable position (3) while using the keyboard, pointing device, or external mouse. Let your upper arms hang naturally at your sides. Have breaks during sessions with your computer. Excessive use of the computer may strain muscles or tendons.

- **Furniture and posture** – Sit in a chair with good back support and armrests. Adjust the level of the chair so your feet are flat on the floor. A footrest may make you more comfortable. Sit with relaxed, upright posture — avoid slouching forward or leaning far backward.
- **Viewing angle of the display** – Position the display 18 to 26 inches directly in front of you, with the top of the screen at or a little below eye level. Use the display's tilting feature to find the best position. You can reduce eye strain and muscle fatigue by placing the display in the proper position.
- **Lighting** – Choose a location where windows and lights do not create glare and reflection on the display. Use indirect lighting to avoid bright spots on the display. You can also purchase accessories for your display that help reduce glare. Proper lighting adds to your comfort and work effectiveness.

Getting Started

This section describes how to get started with using your VAIO computer.

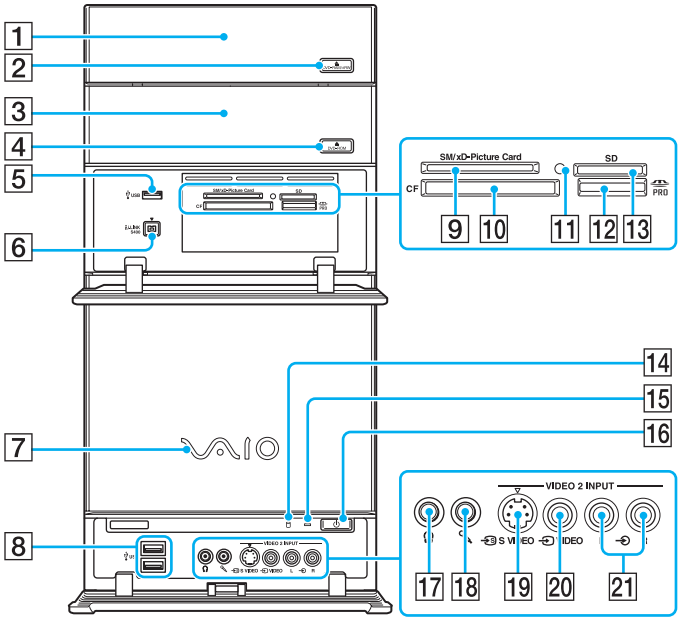
❑ **Locating Controls and Ports** (page 12)
❑ **About the Indicator Lights** (page 15)
❑ **Setting Up Your Computer** (page 16)
❑ **Shutting Down Your Computer Safely** (page 30)

Locating Controls and Ports

Take a moment to identify the controls and ports shown on the following pages.

!
Your computer may not be equipped with all of the hardware features described in this section. The location of the controls, ports, and jacks may vary from the illustrations shown below, depending on the model you purchased. See the online **Specifications** for your computer's specific hardware configuration.

Front



1 Optical disc drive 1 (page 43)
See the online **Specifications** for your computer's hardware configuration.

2 Drive 1 eject button (page 43)

3 Optical disc drive 2 (page 43)
See the online **Specifications** for your computer's hardware configuration.

4 Drive 2 eject button (page 43)

5 Hi-Speed USB (USB 2.0) port*1 (page 77)

6 i.LINK® (IEEE1394) S400 port (page 81)

7 VAIO power indicator (page 15)

8 Hi-Speed USB (USB 2.0) ports*1 (page 77)

9 **SM/xD-Picture Card** slot (page 69)

10 **CF** (CompactFlash®) memory card slot (page 69)

11 Media Access indicator (page 15)

12 Memory Stick media slot*2 (page 69)

13 **SD** memory card slot (page 69)

14 Drive indicator (page 15)

15 Standby indicator (page 15)

16 Power button

17 Headphones jack (page 19)

18 Microphone jack (page 74)

19 S Video In port (page 75)

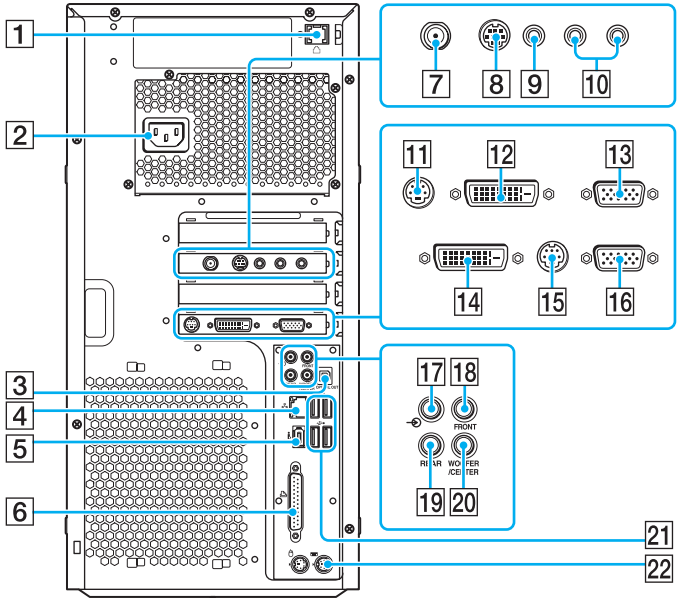
20 Composite Video In jack (page 75)

21 Composite Audio In jacks (page 75)

*1 Supports high-/full-/low- speeds.

*2 Your computer supports Memory Stick Duo media and Memory Stick Pro high speed and high capacity capabilities.

Back



1 Modem port (page 25)
2 AC Input port (page 28)
3 S/PDIF Optical Out port for connecting digital equipment such as an AV amplifier.
4 Network (Ethernet) port (page 83)
5 i.LINK® (IEEE1394) S400 port (page 81)
6 Printer port (page 80)
7 VHF/UHF port (page 50)
8 S Video In port (page 75)
9 Composite Video In jack (page 75)
10 Composite Audio In (L/R) jacks (page 75)
11 TV Out (S Video/Video) jack*1 for connecting a TV monitor.
12 DVI-D port*1 (page 17)
13 Monitor port*1 (page 17)
14 DVI-D port*2 (page 17)
15 TV Out (S Video/Video) jack*2 for connecting a TV monitor.
16 Monitor port*2 (page 17)
17 Line In jack (page 19)
18 **FRONT** jack (page 19)
19 **REAR** jack (page 19)
20 **WOOFER/CENTER** jack (page 19)
21 Hi-Speed USB (USB 2.0) ports*3 (page 77)
22 Keyboard port (page 21)

*1 On models with the NVIDIA video controller.
*2 On models with the ATI video controller.
*3 Supports high-/full-/low- speeds.

About the Indicator Lights

Your computer is equipped with the following indicator lights.

Indicator	Functions
VAIO power	Illuminates when the computer is on and turns off when the computer is off.
Standby	Illuminates in orange only when the computer is in Standby mode.
Media Access	Illuminates when data is read from or written to a memory card. (Do not enter Standby mode or turn off the computer when this indicator is on.) When the indicator is off, the memory card is not being used.
Drive	Illuminates when data is read from or written to the hard disk or optical disc drive. Do not enter Standby mode or turn off the computer when this indicator is on.

Setting Up Your Computer

Your computer may not be equipped with all of the hardware features described in this section. The location of the controls, ports, and jacks may vary from the illustrations shown below, depending on the model you purchased. See the online **Specifications** for your computer's specific hardware configuration.

- **Connecting a Display (Monitor)** (page 17)
- **Connecting Speaker Systems** (page 19)
- **Connecting the Keyboard and Mouse** (page 21)
- **Connecting the Radio Frequency Receiver for the Wireless Keyboard and Mouse** (page 23)
- **Connecting the Telephone and Modem** (page 25)
- **Connecting the Power Cord** (page 28)

Connecting a Display (Monitor)

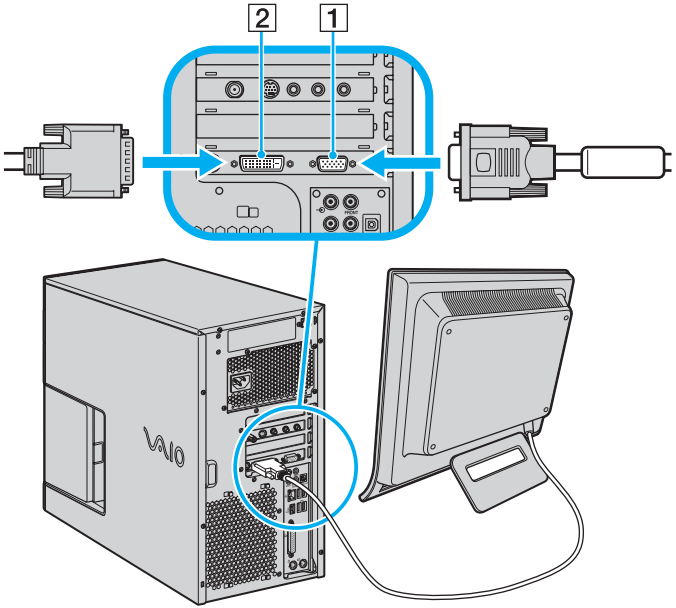
Your computer may be supplied with a display. For details on the bundled accessories, see the online **Specifications**.

To connect a display

1 If you want to connect a VGA monitor, plug the display's cable into the monitor (VGA) port (1).

2 If you want to connect a DVI monitor, plug the display's cable into the DVI-D port (2).

3 If necessary, plug the display's cable into the rear of the display.



! A video adapter device is required to connect a VGA monitor using the DVI-D port.

Models with the NVIDIA video controller are compliant with the High-bandwidth Digital Content Protection (HDCP) specification. To view contents that require the HDCP specification for playback or output, use an HDCP-compliant display.

Connecting Speaker Systems

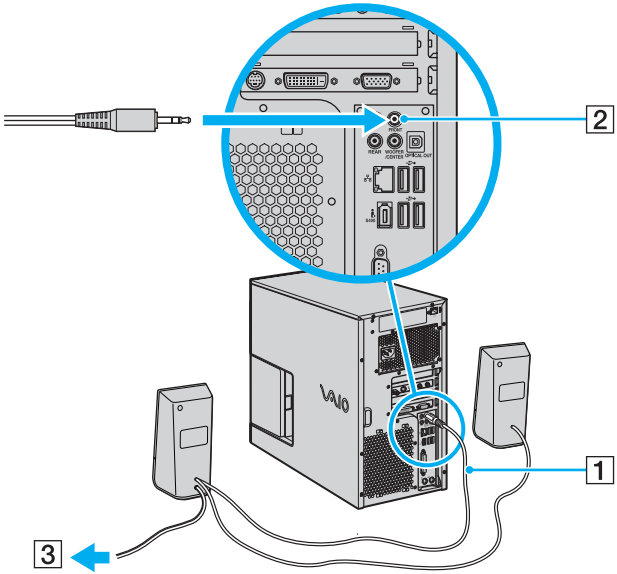
Your computer may be supplied with a speaker system, or you may wish to use your own speaker system. Note that speaker configuration varies, depending on the speaker components in use.

To set up the speakers with the computer

- ❑ Match the color of the mini stereo plugs (from the speaker system) to the color of the speaker jacks on the back of the computer.
- ❑ Review the connection instructions provided with your speaker system, as the connection setup may vary.

To connect the supplied 2-channel speakers

1. Plug the speaker cable (1) from the back of the right speaker to the **FRONT** jack (2) on the back of the computer.
2. Plug the power cable from the right speaker to a grounded AC wall outlet, surge protector, or Universal Power Supply (UPS) (3).



To select the speaker system

1 Click **Start** and then **Control Panel**.

2 Click **Sounds, Speech, and Audio Devices**.

3 Click **Sounds and Audio Devices**.

4 Click **Advanced** under **Speaker settings** on the **Volume** tab.

5 Select your speaker system from the **Speaker setup** drop-down list.

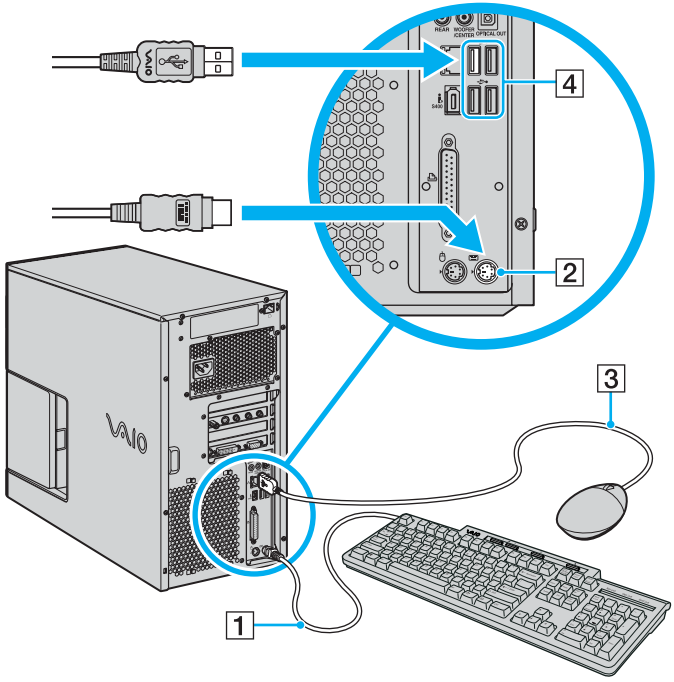
Connecting the Keyboard and Mouse

Your computer may be supplied with a PS/2 keyboard and a USB mouse. For details on the bundled accessories, see the online **Specifications**.

To connect the keyboard and mouse

1 Plug the keyboard cable (1) into the keyboard port (2) on the back of the computer.

2 Plug the mouse cable (3) into one of the USB ports (4) on the back of the computer.


4
2
3
1

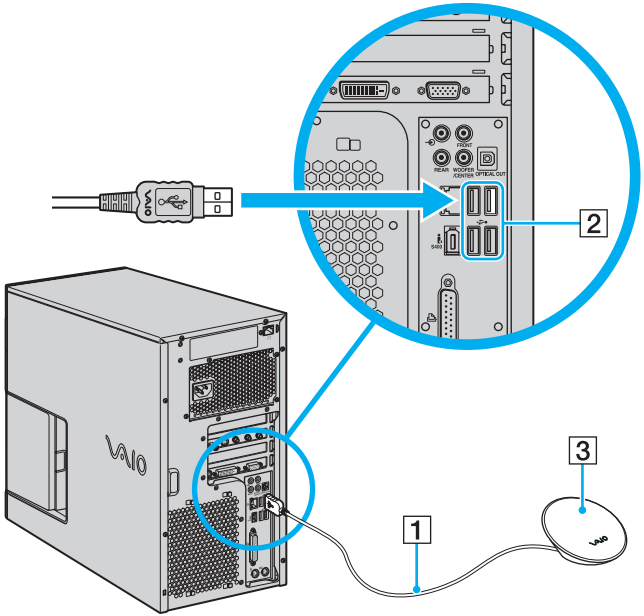
Connecting the Radio Frequency Receiver for the Wireless Keyboard and Mouse

If your computer is supplied with a wireless keyboard and mouse, a radio frequency receiver is also supplied to enable the computer to communicate with the wireless keyboard and mouse. Make sure to connect the radio frequency receiver before using the wireless keyboard and mouse.

For establishing communication with the wireless keyboard and mouse, see **Using the Wireless Keyboard** **(page 32)** and **Using the Mouse** **(page 37)**.

To connect the radio frequency receiver

1 Plug the radio frequency receiver cable (1) into one of the USB ports (2) on the back of the computer. You can now use your radio frequency receiver (3).



Connecting the Telephone and Modem

Your computer is equipped with a single modem port to connect the internal modem with a telephone wall jack. To use the wall jack for both telephone and modem lines, purchase an additional RJ-11 phone cable and a "1-to-2" port adapter device (splitter).

To connect the modem

1. Unplug your telephone from the wall jack and set aside.
2. Plug another phone cable (not supplied) into the modem port on the back of the computer.
3. Plug the other end of the cable into the wall jack.

To connect the telephone and modem

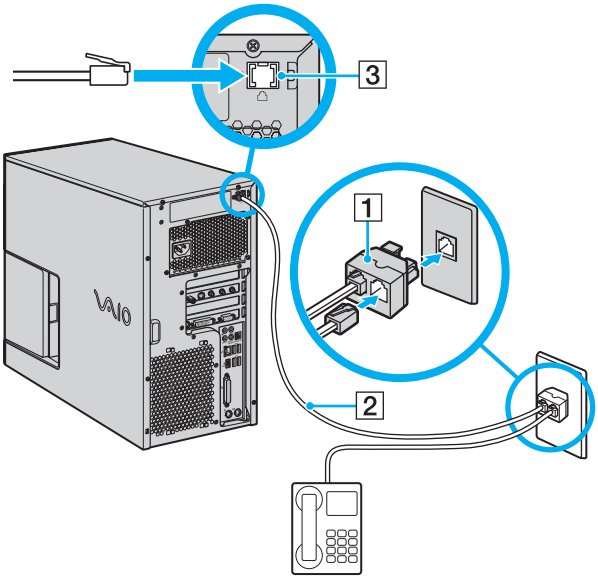
1 Unplug the phone cable to your telephone from the wall jack.

2 Plug it into one of the ports on a "1-to-2" port adapter device (splitter) (1).

3 Plug one end of a second phone cable (not supplied) into the other port on the splitter device.

4 Insert the plug end of the splitter device into the wall jack.

5 Plug the other end of the second phone cable (2) into the modem port (3) on the back of the computer.



!

Your computer has a protective sticker covering the Network (Ethernet) port located on the back of the computer. Connect 10BASE-T, 100BASE-TX, or 1000BASE-T cables to the Network (Ethernet) port, depending on your computer's Network (Ethernet) port specification. Using incorrect cables or a phone cable may result in an electric current overload that can cause a malfunction, excessive heat, or fire in the Network (Ethernet) port. For help on connecting to a network, see your network administrator.

Connecting the Power Cord

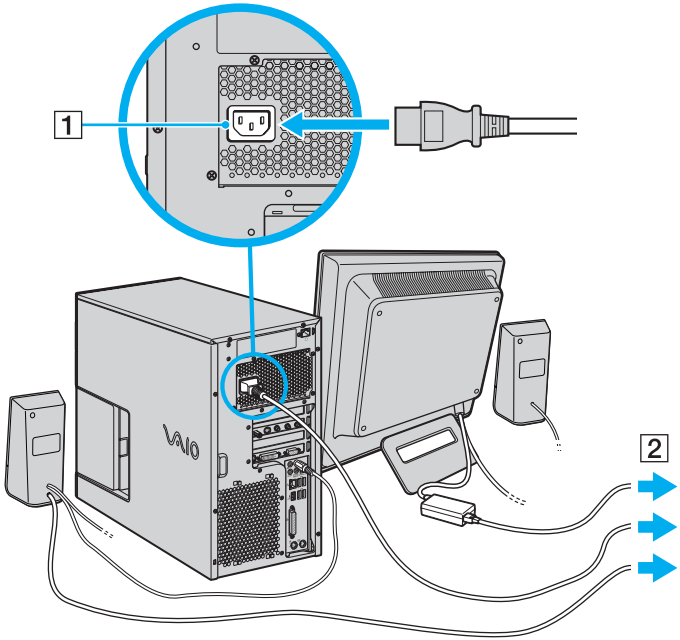
Your computer's power cord must be plugged into an AC power source, such as an AC wall outlet, surge protector, or Uninterruptible Power Supply (UPS), before you can establish communication with your wireless keyboard and wireless mouse.

!
Use only the power cord supplied with the computer.

To connect the power cord

1 Insert the power cord into the AC In port (1) on the back of the computer.

2 Insert the power cord plugs from the display, computer, and speakers into a grounded AC wall outlet, surge protector, or Universal Power Supply (UPS) (2).



To disconnect the computer completely from AC power, unplug the power cord.

Make sure that the AC outlet is easily accessible.

If you are interrupted and need to leave your computer suddenly, place the computer into Hibernate mode. See **Using Hibernate Mode** (page 91). This power saving mode saves the time of shutting down and the time of resuming.

Shutting Down Your Computer Safely

To avoid losing unsaved data, be sure to shut down your computer properly, as described below.

To shut down your computer

1. Turn off any peripherals connected to the computer.
2. Click **Start** and then **Turn Off Computer**.
   The **Turn off computer** window appears.
3. Click **Turn Off**.
4. Respond to any prompts warning you to save documents or to consider other users and wait for the computer to turn off automatically.

   The VAIO power indicator turns off.

Using Your VAIO Computer

This section describes how to get the most out of using your VAIO computer.

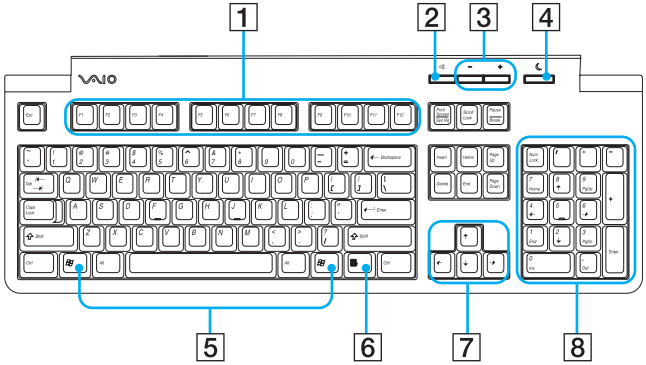
❑ **Using the Keyboard** (page 32)
❑ **Using the Mouse** (page 37)
❑ **Using the Optical Disc Drive** (page 43)
❑ **Using the TV Function** (page 49)
❑ **Using the Memory Stick Media** (page 65)
❑ **Using Other Memory Cards** (page 69)
❑ **Using the Internet** (page 72)

Using the Keyboard

A wireless or wired keyboard may be supplied with your computer, depending on the model you purchased. See the online **Specifications** for details on the bundled accessories.

The wireless and wired keyboards both use a standard key arrangement with additional keys that perform specific functions.

Using the Wireless Keyboard



1 Function keys
Perform certain tasks. The task associated with each function key varies among software applications.

2 Mute button
Turns the volume on and off.

3 Volume control buttons
Increases (+) or decreases (-) the volume.

4 Standby button
Provides for the lowest level of power consumption.
For details on power management, see **Using the Power Saving Modes** **(page 89)**.

5 Windows keys
Display the **Start** menu.

6 Applications key
Displays a shortcut menu in certain software applications.

7 Direction arrows
Move the pointer on the computer screen.

8 Numeric keypad
Use the numeric keypad to type numbers or to perform basic math calculations.

Before You Use the Keyboard

Two AA alkaline batteries are supplied with your computer for use in the wireless keyboard. Before attempting to use the wireless keyboard, you must install the batteries and establish communication between the computer and the keyboard. To connect your wireless keyboard, it must be located within a range of 11 inches from the radio frequency receiver.

!
To maintain good communication, operate the wireless keyboard within the distance limitations of keyboard: approximately 2 feet (approximately 60 cm) from the radio frequency receiver.

Confirm that the supplied AA batteries are properly installed.

Press the **CONNECT** button located on the bottom of the radio frequency receiver first, and then press the **CONNECT** button on the bottom of the keyboard.

Verify the radio frequency receiver is free of obstructions that may prevent proper operation.

Avoid using radio-controlled toys or equipment, CB radios, and other wireless devices in the area near the wireless keyboard. These devices may cause interference, causing the keyboard to stop working properly.

Do not place metal furniture near the computer or wireless keyboard, as this may create interference, causing the keyboard to stop working properly.

Do not mix old (used) and new batteries when replacing batteries in the wireless keyboard. Always use the same type and manufacture of battery.

Do not mix alkaline with manganese batteries. Using incompatible batteries or mixing used, new or different types of batteries can damage the keyboard.

To connect the wireless keyboard

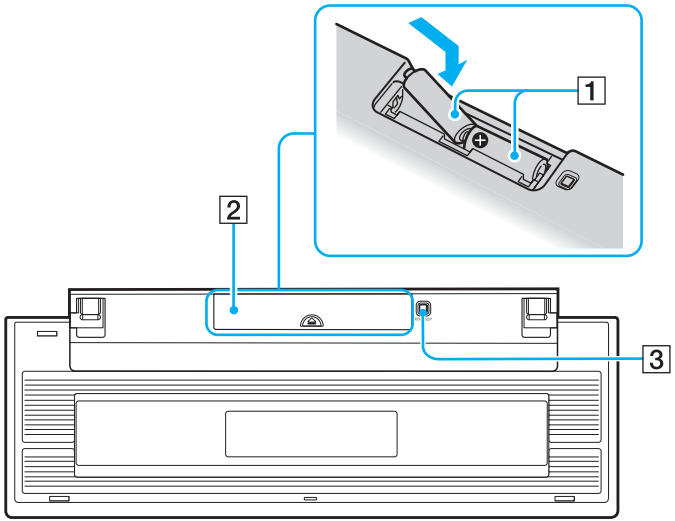
1 Insert the supplied two AA batteries (1) into the battery compartment (2) on the bottom of the wireless keyboard.

2 Turn on the computer.

3 Press the **CONNECT** button on the bottom of the radio frequency receiver.

4 Press the **CONNECT** button (3) on the bottom of the keyboard.
Communication between the wireless keyboard and the computer should now be established.

!
Steps 3 and 4 must be completed within 10 seconds of each other.



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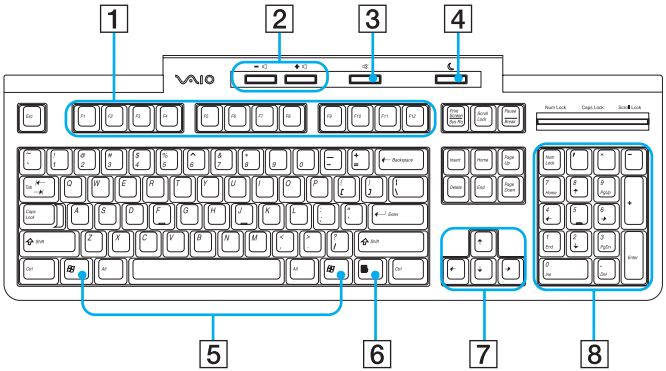
You can check the keyboard's battery power level by clicking (wireless keyboard icon) on the taskbar. A warning message may also appear on the screen when the keyboard's battery power becomes low.

If the wireless keyboard does not operate properly, the batteries may need to be replaced. If the wireless keyboard is not being used for an extended period of time, remove the batteries to avoid possible damage from battery leakage.

If you want to put the keyboard in a more 'ergonomical' position, open the keyboard feet.

Using the Wired Keyboard



1 Function keys
Perform certain tasks. The task associated with each function key varies among software applications.

2 Volume control buttons
Increases (+) or decreases (-) the volume.

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Provides for the lowest level of power consumption.
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5 Windows keys
Display the **Start** menu.

6 Applications key
Displays a shortcut menu in certain software applications.

7 Direction arrows
Move the pointer on the computer screen.

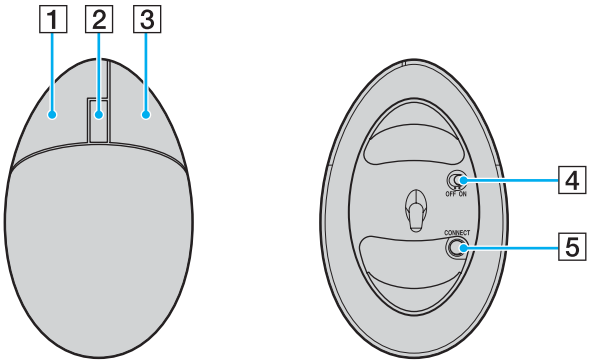
8 Numeric keypad
Use the numeric keypad to type numbers or to perform basic math calculations.

Using the Mouse

A wireless or wired mouse may be supplied with your computer, depending on the model you purchased. See the online **Specifications** for details on the bundled accessories.

Using the Wireless Mouse

Your computer may be supplied with a wireless optical mouse, which has no cables to plug in and uses a light-emitting diode (LED) instead of a ball.



1 Left button
Click or double-click the left button to select items. To drag and drop items, hold the left button down while sliding the mouse, then release the button to drop the item.

2 Central wheel
Rotate the central wheel to scroll up or down a page. Press the wheel once to lock the scroll action and control the movement by moving the entire mouse (the scroll function is available only with applications that support it).

3 Right button
Press the right button once to display a context-sensitive shortcut menu (not always an active function).

4 Power switch
Slide the switch to turn the mouse on and off. This will help you save battery power.

5 **CONNECT** button
Press to enable communication between the computer and the wireless mouse.

Before You Use the Mouse

Two AA alkaline batteries are supplied with your computer for use in the wireless mouse. Before using the wireless mouse, you must install the batteries and establish communication between your computer and the mouse. To connect the wireless mouse, it must be located within a range of 11 inches from the radio frequency receiver.

!

To maintain good communication, operate the wireless mouse within the distance limitation of the mouse: approximately 2 feet (60 m) from the radio frequency receiver.

Confirm that the supplied AA batteries are properly installed.

Press the **CONNECT** button located on the bottom of the radio frequency receiver first, and then press the **CONNECT** button on the bottom of the mouse.

Verify the radio frequency receiver is free of obstructions that may prevent proper operation.

Avoid using radio-controlled toys or equipment, CB radios, and other wireless devices in the area near the wireless mouse. These devices may cause interference, causing the mouse to stop working properly.

Use surfaces such as plain paper, card stock, or fabric that have minimal repetitive patterns.

Avoid surfaces such as mirrors, smooth glass, or magazines that have half- tone printing.

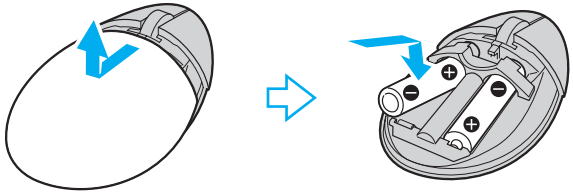
Do not place metal furniture near the computer or wireless mouse, as this may create interference, causing the mouse to stop working properly.

Do not mix old (used) and new batteries when replacing batteries in the wireless mouse. Always use the same type and manufacture of battery.

Do not mix alkaline with manganese batteries. Using incompatible batteries or mixing used, new or different types of batteries can damage the mouse.

To connect the wireless mouse

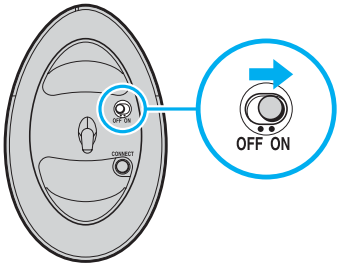
1 Insert the supplied two AA batteries into the wireless mouse as shown below.



2 Turn on the computer.

3 Press the **CONNECT** button on the bottom of the radio frequency receiver.

4 Turn over the wireless mouse, slide the power switch to the **ON** position, and press the **CONNECT** button. Communication between the wireless mouse and the computer should now be established.



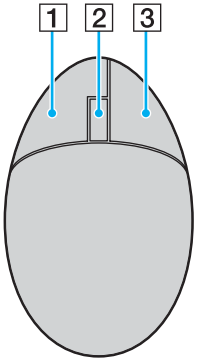
! Step 3 and 4 must be completed within 10 seconds of each other.

✍

You can check the battery power level for the mouse by clicking (wireless mouse icon) on the taskbar.

If the wireless mouse does not operate properly, the batteries may need to be replaced. If the wireless mouse is not being used for an extended period of time, remove the batteries to avoid possible damage from battery leakage.

Using the Wired Mouse



1 Left button
Click or double-click the left button to select items. To drag and drop items, hold the left button down while sliding the mouse, then release the button to drop the item.

2 Central wheel
Rotate the central wheel to scroll up or down a page. Press the wheel once to lock the scroll action and control the movement by moving the entire mouse (the scroll function is available only with applications that support it).

3 Right button
Press the right button once to display a context-sensitive shortcut menu (not always an active function).

Adjusting the Mouse Functions

1 Click **Start** and then **Control Panel**.

2 Click **Printers and Other Hardware**.

3 Click **Mouse**.
The **Mouse Properties** window appears.

4 Change the settings.

Using the Optical Disc Drive

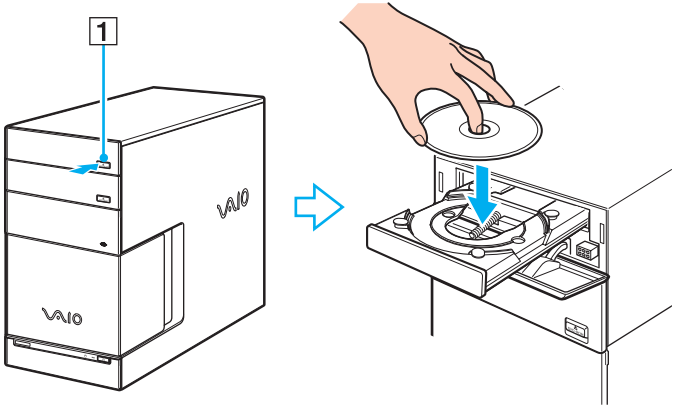
Your computer may be equipped with one or two optical disc drives. See the online **Specifications** for your computer's specific hardware configuration.

To insert a disc

1 Turn on the computer.

2 Press the drive eject button (1) on the top or bottom optical disc drive, depending on your computer's hardware configuration.
The tray slides out.

3 Place a disc in the middle of the tray with the label side facing up and gently push until the disc clicks into place.



4 Close the tray by pushing it in gently.

! Do not remove the optical disc when the computer is in a power saving mode (Standby or Hibernate). Doing so may cause the computer to malfunction.

Reading and Writing CDs and DVDs

Your computer plays and records CDs and DVDs, depending on the model you purchased. Check your specifications for the type of optical disc drive installed on your model. Use the table below to see which types of media your optical disc drive supports.

Optical disc drive	Plays	Records to
CD-ROM	CD, CD-R, and CD-RW	—
DVD-ROM	CD, CD-R, CD-RW, DVD and most DVD-R, DVD-RW, DVD+R, DVD+RW and DVD+R DL (Double Layer)*	—
CD-RW/DVD-ROM	CD, CD-R, CD-RW, DVD, most DVD-R, DVD-RW, DVD+R, DVD+R DL (Double Layer)* and DVD+RW	CD-R and CD-RW
DVD±RW	CD, CD-R, CD-RW, DVD, most DVD-R, DVD-RW, DVD+R, DVD+R DL (Double Layer)* and DVD+RW	CD-R, CD-RW, DVD-R, DVD-RW, DVD+R, DVD+R DL (Double Layer)* and DVD+RW

* On selected models only.

! This product is designed to playback discs that conform to the Compact Disc Digital Audio standard specifications (CD Standard). A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. Please be aware that the audio side (non-DVD side) of a DualDisc may not play on this product because it does not conform to the CD Standard.

! Due to the multiple formats of discs now available, when buying pre-recorded or blank discs for use with a VAIO computer, be sure to read the notices on the disc packaging carefully to check both playback and recording compatibility with your computer's optical disc drives. Sony does NOT guarantee the compatibility of VAIO CD drives with discs that not compliant with the official "CD" format standard (or "DVD" standard in relation to DVD drives). USING NON-COMPLIANT DISCS CAN CAUSE FATAL DAMAGE TO YOUR VAIO PC OR CREATE SOFTWARE CONFLICTS AND CAUSE SYSTEM HANGING. For inquiries about disc formats, contact the individual publisher of the pre-recorded disc or the manufacturer of the recordable disc.

✍
Supports writing to DVD-RW discs compliant with DVD-RW version 1.1/1.2.

Supports writing to DVD-R discs compliant with DVD-R for General version 2.0/2.1.

Supports 8cm disc reading, but does not support 8cm disc writing.

Writing to DVD+R DL (Double Layer) discs is available only on discs supporting DVD+R DL (Double Layer) recording.

Notes on writing data onto a disc

- To make the data on a disc readable on an optical disc drive, you need to close the session when you eject it. To complete this process, follow the instructions included with your software.
- Only use circular discs. Do not use discs in any other shape (star, heart, card, etc.), as this may damage the optical disc drive.
- Do not strike or shake the computer while writing data onto a disc.
- Deactivate the screen saver and exit anti-virus software before writing data onto a disc.
- Do not use memory-resident utility software while writing data to a disc. This may cause the computer to malfunction.
- When using your software application to burn discs, make sure you exit and close all other applications.
- Never touch the surface of the disc. Fingerprints and dust on the surface of a disc may cause writing errors.
- Do not switch power modes while using the pre-installed software and while using the CD burning software.
- Never put stickers on discs. This will affect the use of the disc irreparably.

Notes on playing DVDs

To achieve optimum performance when playing DVDs, you should follow these recommendations.

- ❑ Close all open applications before playing a DVD movie.
- ❑ Do not use memory-resident utility software to speed up disc access when playing a DVD. This may cause the computer to malfunction.
- ❑ Deactivate the screen saver and exit anti-virus software before playing a disc.
- ❑ Some discs recorded at 20 or 24 bits may produce noise while playing. If you have audio devices connected, this may damage your hearing and the speakers. Reduce the volume before playing a DVD.
- ❑ Do not switch power saving modes while the computer is playing a DVD.
- ❑ Region code indicators are labeled on the DVDs to indicate in which region and on what type of player you can play the disc. If the DVD is labeled "all," this means that you can play this DVD in most regions of the world. If the region code of your residence area is different from the label on the DVD disc or on the packaging, you cannot play the disc on this player.

Playing CDs

To play an audio CD

1. Insert the disc into the optical disc drive.
2. If nothing appears on the desktop once you insert an audio CD disc, then click **Start**, point to **All Programs**, and click to open a CD program, such as the **SonicStage** software.

   If the **Audio CD** window appears, click to select an option.

Copying Files to CDs

To determine which type of CD your computer supports, see **Reading and Writing CDs and DVDs (page 44)**.

To copy files to a CD-RW or CD-R

! Do not strike or shake the computer while writing data onto a disc.

1. Insert a blank CD-R or CD-RW disc into the optical disc drive.
   If the **CD Drive** window appears, click **Take no action**.
2. Open Windows Explorer by pressing the **Windows** key and the **E** key simultaneously.
3. In the **Folders** panel on the left, locate the file(s) or folder(s) you want to copy and either:
   - ❑ Right-click the file(s) or folder(s), point to **Send To**, and click the optical disc drive* name.
   - ❑ Drag the file(s) or folder(s) onto the optical disc drive icon in the **Files Stored on This Computer** panel.
4. Close Windows Explorer.
5. Click **Start** and then **My Computer**.
6. Click the optical disc drive icon under **Devices with Removable Storage**. A new window appears with the file(s) or folder(s) you want to copy listed under **Files Ready to Be Written to the CD**.
7. In the **CD Writing Tasks** box, click **Write these files to CD**.
8. Follow the instructions in the **CD Writing Wizard**.

* The read/write drive letter designation may vary, depending on your system's hardware configuration.

Playing DVDs

To play a DVD

1 Close all open programs.

2 Insert the DVD into the optical disc drive.

3 Click **Start** and point to **All Programs**.

4 Select a DVD software program to play the DVD.

For instructions on how to use a program, see the help guide included with the DVD software program.

Copying Files to DVDs

The DVD writing function is available on selected models only. See the online **Specifications** to see whether your model is equipped with an optical disc drive capable of DVD writing.

To copy files to a DVD-R or DVD-RW

1 Insert the disc into the optical disc drive.

2 Click **Start** and point to **All Programs**.

3 Select a DVD software program you want to use from the submenu.

For instructions on how to use a program, see the help guide included with the DVD software program.

Using the TV Function

Your computer may have a TV tuner board installed along with the **Microsoft Windows XP Media Center Edition** operating system to enhance your computing experience. See the online **Specifications** to see if the TV function is available on your model.

Media Center provides you with a wide range of TV, DVD, and video viewing, as well as music recording and playback. This section describes how to set up your TV, set-top box, and other equipment. See the online **MCE guide** for more information on Media Center features.

To access the online MCE guide

1. Click **Start**, point to **All Programs**, and click **VAIO Support Central**.
2. Click **VAIO Documentation**.
3. Click **MCE guide**.

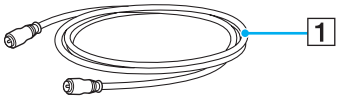
Setting Up TV Connections

! The following connections may not be available depending on the country or area of your residency.

The best method of connecting your computer system, TV monitor or display, and cable service access, depends on the type of cable connection available in your home.

TV signal reception strength will vary widely depending on service availability in your area as well as the type of connection available.

One primary cable to connect the computer to a TV cable or antenna is the TV coaxial cable (not supplied). One end connects to the computer's VHF/UHF port, and the other end connects to the cable service access or antenna.



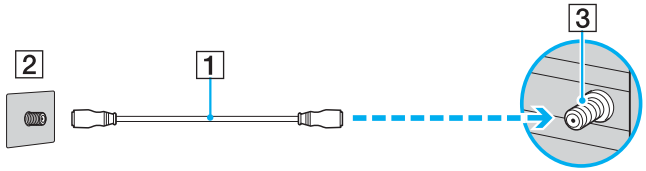
1 TV coaxial cable

Connecting to standard cable access (CATV)

To connect in CATV mode (Option 1)

1 Connect one end of the TV coaxial cable (1) (not supplied) to your cable service access (wall outlet) (2).

2 Connect the other end of the coaxial cable to the VHF/UHF port (3) on the computer.

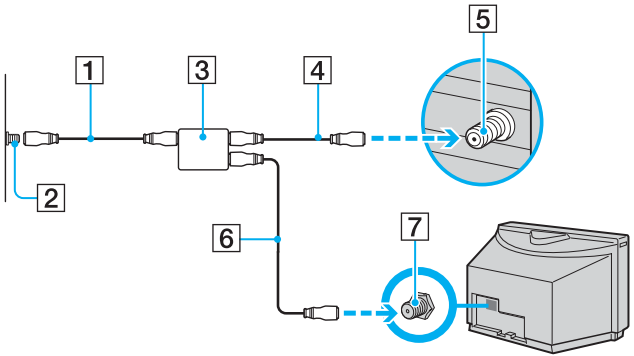


To connect in CATV mode (Option 2)

1 Connect one end of a TV coaxial cable (1) (not supplied) to your cable service access (wall outlet) (2). Connect the other end to the single-connection side of a splitter adapter (3) (not supplied).

2 Connect a second TV coaxial cable (4) (not supplied) to the double-connection side of the splitter adapter (3). Connect the other end to the VHF/UHF port (5) on the computer.

3 Connect a third TV coaxial cable (6) (not supplied) to the double-connection side of the splitter adapter (3). Connect the other end to the VHF/UHF port (7) on the back of your TV monitor or display.



Connecting to a standard antenna

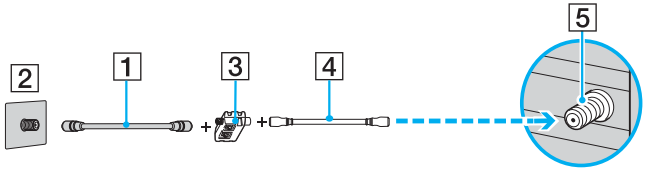
You can connect your computer to an indoor/outdoor antenna system, using Option 1 or Option 2 from the previous section, **Connecting to standard cable access (CATV)** **(page 51)**. Depending on the type of antenna system in your home, your connection may require a VHF/UHF RF combiner/transformer (not supplied) to connect the computer and the indoor/outdoor antenna system.

If you are connecting to an indoor/outdoor antenna, you may need to reorient the antenna for best reception. Move the antenna cable away from other power sources or connectors to reduce reception interference.

To connect in terrestrial mode (Option 1)

1 Connect one end of a TV coaxial cable (1) (not supplied) to your antenna outlet (2). Connect the other end to a VHF/UHF RF combiner/transformer (3) (not supplied).

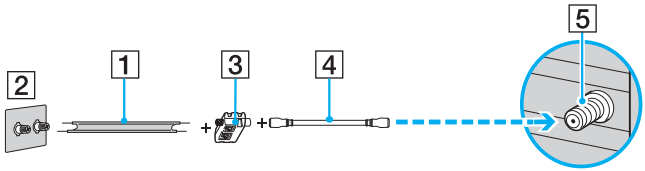
2 Connect another TV coaxial cable (4) (not supplied) from the combiner/transformer (3) to the VHF/UHF port (5) on the computer.



To connect in terrestrial mode (Option 2)

1 Connect one end of the antenna's 300-ohm twin lead cable (1) to the screw-type grips at your antenna outlet (2). Connect the other end to the grips on the VHF/UHF RF combiner/transformer (3).

2 Connect a TV coaxial cable (4) (not supplied) from the combiner/transformer (3) to the VHF/UHF port (5) on the computer.



Connecting with a cable or satellite set-top box (STB)

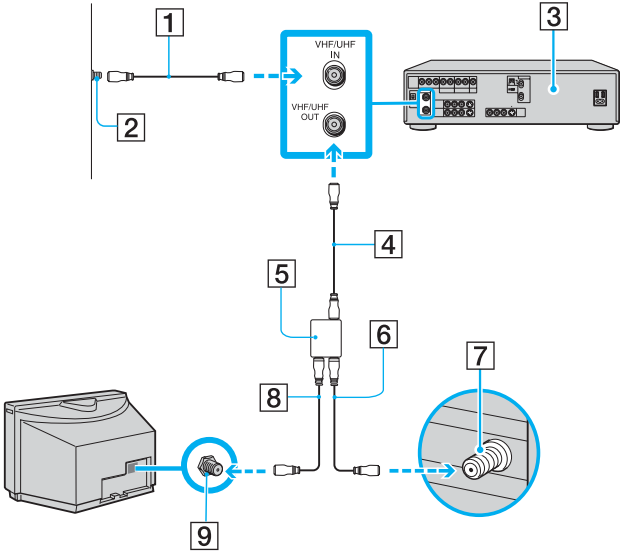
You can connect your computer to cable service access that uses a set-top box (cable or satellite). When using the set-top box (STB) setup, you can only change channels through the STB, using its controls or supplied remote commander.

When using the STB setup:

- A standard TV remote control cannot be used to change TV channels. You can use your TV remote control to set the TV to the channel-out number (channel 3, 4, etc.) or direct video input specified by your cable or satellite service provider.
- You may be able to use a universal remote control or commander to change TV channels, if the device is able to control the STB.

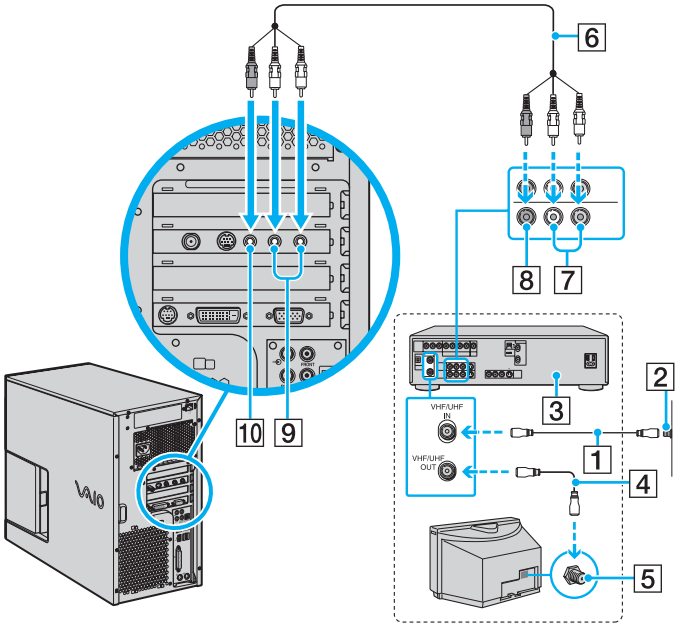
To connect in STB mode (Option 1)

1. Connect one end of a TV coaxial cable (1) (not supplied) to your cable service access (wall outlet) (2). Connect the other end to the VHF/UHF IN jack on the back panel of your set-top box (STB) (3).
2. Connect a second TV coaxial cable (4) (not supplied) to the VHF/UHF OUT jack on your STB unit (3). Connect the other end to the single-connection end of a splitter device (5) (not supplied).
3. Connect a third TV coaxial cable (6) (not supplied) to the double-connection end of the splitter device (5). Connect the other end to the VHF/UHF port (7) on the computer.
4. Connect a fourth TV coaxial cable (8) (not supplied) to the double-connection end of the splitter device (5). Connect the other end to the VHF/UHF port (9) on the rear of your TV monitor or display.


1
2
VHF/UHF
IN
VHF/UHF
OUT
3
4
5
6
7
8
9

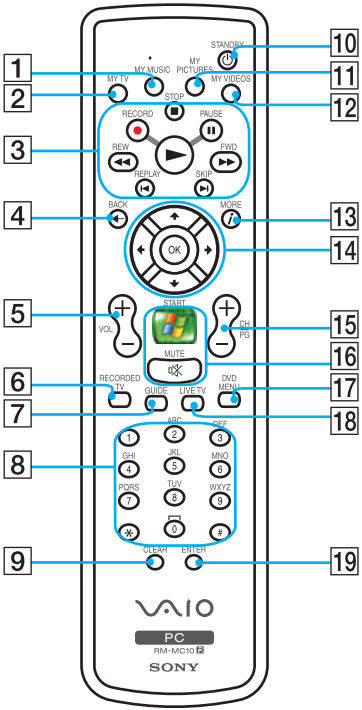
To connect in STB mode (Option 2)

1. Connect one end of the TV coaxial cable (1) (not supplied) to your cable service access (wall outlet) (2). Connect the other end to the VHF/UHF IN jack on the back panel of your set-top box (STB) (3).
2. Connect a second TV coaxial cable (4) (not supplied) to the VHF/UHF OUT jack on your STB unit (3). Connect the other end to the VHF/UHF port (5) on the rear of your TV monitor or display.
3. Connect one end of a stereo A/V dubbing cable with triple RCA jacks (6) (not supplied), to the Composite Audio Out (L/R) jacks (7) and the Video Out jack (8) on the back panel of your STB unit (3), matching the plug and jack colors.
4. Connect the other RCA jacks of the stereo A/V dubbing cable (6) into the Composite Audio In (L/R) jacks (9) and the Composite Video In jack (10) on the computer, matching the plug and jack colors.


6
8
7
10
9
VHF/UHF
IN
VHF/UHF
OUT
3
2
1
4
5

Using the Remote Commander

If your computer supports the TV function, then it is supplied with a remote commander for using Media Center features, including TV channel selection.



1 **MY MUSIC** button
Press to view and listen to your music playlists.

2 **MY TV** button
Press to view the My TV menu.

3 **STOP** button
Press to stop media playback or TV recording session.
PAUSE button
Press to pause media playback. Press again to resume playback.
FWD button
Press to fast-forward media at three speeds.
SKIP button
Press to move media forward, for example, one audio track, one DVD chapter, and 30 seconds of recorded TV or video.
REPLAY button
Press to move media backward, for example, one audio track, one DVD chapter, and seven seconds of TV or video.
REW button
Press to move media backward at two speeds.
RECORD button
Press to begin recording.
PLAY ► button
Press to begin media playback.

4 **BACK** button
Press to return to the previous window.

5 **VOL** button
Press to increase (+) or decrease (-) the volume.

6 **RECORDED TV** button
Press to view previously recorded TV programs (In **My TV** window).

7 **GUIDE** button
Press to view the TV program guide for your area.

8 Channel number buttons (0-9)
Press to select specific channels or enter text. (Press **Enter** or **OK** to activate the channel selection.)

9 **CLEAR** button
Use to backspace and delete entered text.

10 **STANDBY** button
Press to place the computer in Standby mode to reduce power consumption.

11 **MY PICTURES** button
Press to view pictures or a slide show.

12 **MY VIDEOS** button
Press to view videos from your video collection.

13 **MORE** button
Press to view additional options that are available for Media Center features.

14 Directional arrow buttons
Press the ↑, ↓, ←, and → buttons to move the pointer on the screen.
OK button
Press **OK** to select the desired action or window option. When watching full-screen TV, press **OK** to return to the previous channel. Press **OK** again to switch between channels.

15 **CH/PG** (Channel/Page) button
Press to change or page up/down channels (no number input required).

16 **START** button
Press to open the **Media Center Start** menu.
MUTE button
Press to turn off the sound. Press again to restore the sound.

17 **DVD MENU** button
Press to open the main menu on a DVD.

18 **LIVE TV** button
Press to view TV programming.

19 **ENTER** button
Press to activate feature or action, such as channel selection or return to previous channel. (This button's actions are similar to using the OK button.)

Before you use the remote commander

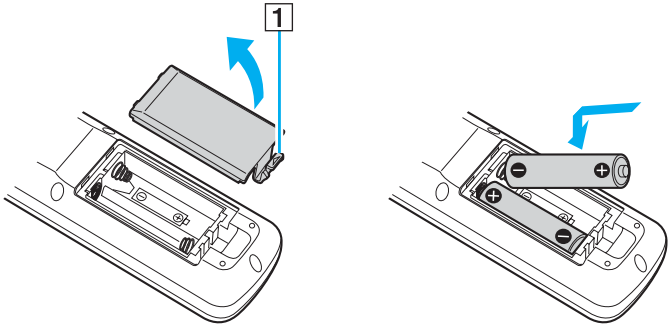
Before using the remote commander, you need to insert the supplied AA manganese batteries and connect the remote sensor to enable communication between the computer and the remote commander.

To insert batteries

1 Turn the remote commander over.

2 Press in the tab (1) and lift the battery cover up.

3 Insert the supplied two AA batteries into the remote commander.



4 Align the battery cover to the remote commander.

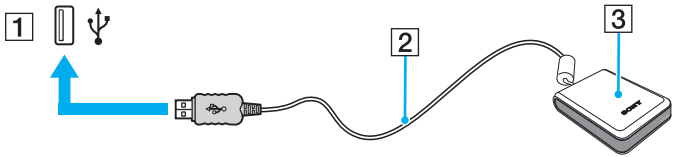
5 Press down until the cover clicks into place.

If the remote commander does not operate properly, you may need to replace the batteries. When the remote commander is not being used for extended periods of time, remove the batteries to avoid possible damage from battery leakage.

To connect the remote sensor

1 Choose the USB port (1) you prefer to use.

2 Plug the remote sensor cable (2) into the USB post.

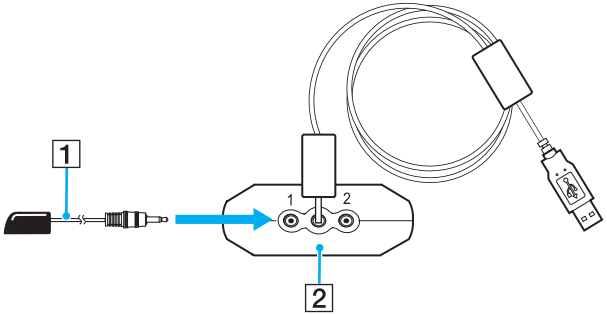


3 Position the remote sensor (3) to enable unobstructed communication with the remote control.

If you are using a cable or satellite set-top box, you can attach the remote sensor control to the remote sensor, which enables you to control the set-top box with the remote commander.

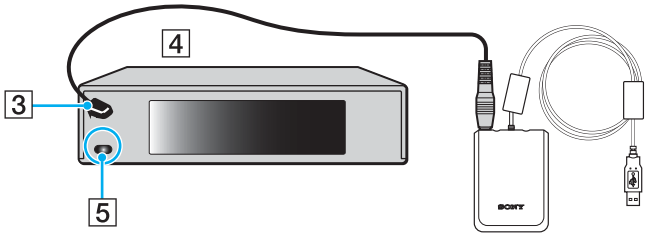
To connect the remote sensor control

1 Plug the remote sensor control cable (1) into either jack (1 or 2) on the back of the remote sensor (2).



2 Remove the adhesive tape cover from the bottom of the remote sensor control.

3 Attach the remote sensor control (3) onto the set-top box (4) near the infrared port (5).



!
Do not cover the infrared port when attaching the remote sensor control.

The remote sensor must be visible in a line-of-sight with the remote commander in order to function properly.

Using the Memory Stick Media

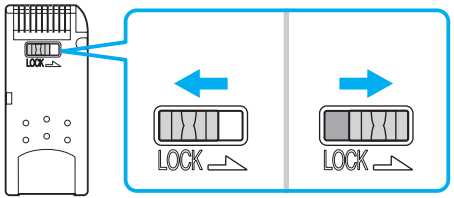
Your computer supports the Memory Stick media. Memory Stick media is a compact, portable, and versatile device especially designed for exchanging and sharing digital data with compatible products, such as digital cameras, mobile phones and other devices. Because it is removable, it can be used for external data storage.

For the latest information on Memory Stick media, visit the Sony online support Web site at http://www.sony.com/pcsupport for customers in USA, at http://www.sony.ca/support for customers in Canada, or at http://www.sony.com/lapcsupport for customers in Latin American countries or areas.

Write-protecting a Memory Stick Media

Some versions of Memory Stick media are designed with an erasure prevention switch to protect valuable data from accidental erasure or overwriting.

Move the tab horizontally or vertically* to set or release write-protection. When the erasure prevention switch is off, data can be saved on the Memory Stick media. When the erasure prevention switch is on, data can be read from but not saved on the Memory Stick media.



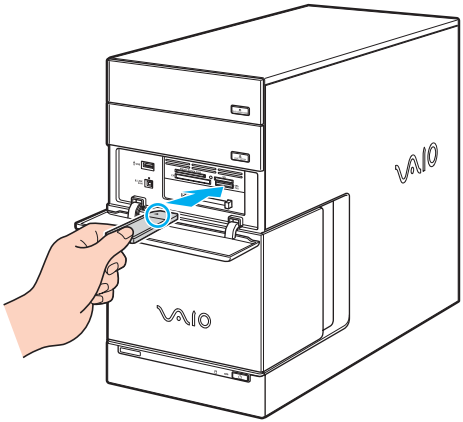
* Some versions of Memory Stick media do not have an erasure prevention switch.

Inserting a Memory Stick Media

The Memory Stick slot is located behind a protective cover on the front of the computer. You need to open the cover before accessing the memory card slots.

To insert a Memory Stick media

1. Flip the upper front panel down, using your fingertip.
2. Locate the Memory Stick media slot.
3. Hold the Memory Stick media with the arrow facing toward the front of the computer and insert it into the Memory Stick media slot in the direction of the arrow.
4. Carefully slide the Memory Stick media into the slot until it clicks in place.
   The Memory Stick media is automatically detected by your system and appears in your **My Computer** window as a local drive, under the appropriate letter (depending on the configuration of the computer).



!
Be sure to hold the Memory Stick media with the arrow pointing in the correct direction as you insert it into the slot. To avoid damaging the computer or the Memory Stick media, do not force the Memory Stick media into the slot if it does not insert smoothly.

Do not insert more than one Memory Stick media into the Memory Stick media slot. Inserting the media improperly may damage the computer.

✍
The computer supports Memory Stick Duo media and is equipped with the Memory Stick combo slot that is compatible with both standard- and duo-size media. For more information on Memory Stick Duo media, visit the Memory Stick web site at http://www.memorystick.com/en/.

To view the contents of the Memory Stick media

1 Click **Start** and then **My Computer** to open the **My Computer** window.

2 Double-click the Memory Stick media icon to view the list of data files saved in the Memory Stick media.

To format a Memory Stick media

Use the **Memory Stick Formatter** software. See the help file on the **Memory Stick Formatter** software for details.

Removing a Memory Stick Media

To remove a Memory Stick media

1 Flip the upper front panel down, using your fingertip.

2 Check that the Media Access indicator is off.

3 Push the Memory Stick media in toward the computer.
The Memory Stick media ejects.

4 Pull the Memory Stick media out of the slot.

!
Always remove the Memory Stick media gently, or it may pop out unexpectedly.

Do not remove the Memory Stick media while the Media Access indicator is turned on. If you do, you may lose data. Large volumes of data may take time to load, so be sure the indicator is off before removing the Memory Stick media.

Using Other Memory Cards

In addition to the Memory Stick media slot, your computer is equipped with three other memory card slots to accommodate many popular types of memory cards. You can use these slots to transfer data between digital cameras, camcorders, music players, and other audio/video devices.

The memory card slots are located behind a protective cover on the front of the computer. You need to open the cover before accessing the memory card slots.

Before You Use Memory Cards

Your computer supports the following memory cards:

- CompactFlash
- Multi Media Card (MMC)
- Microdrive
- SmartMedia
- xD-PictureCards
- Secure Digital (SD)

For the latest information on compatible memory cards, visit the Sony online support Web site regularly.

! Always insert the correct memory card into the appropriate memory card slot.

Do not attempt to insert a different memory card or memory card adapter into a different memory card slot. An incompatible memory card or adapter may be difficult to remove from the wrong slot and can cause damage your computer.

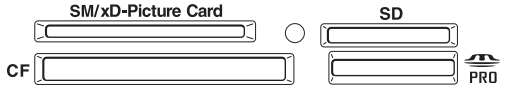
Use care when inserting or removing a memory card from the slot. Do not force the memory card in or out of the slot.

Inserting a Memory Card

To insert a memory card

1 Flip the upper front panel down, using your fingertip.
Do not use force to open the cover.

2 Locate the appropriate slot for the memory card you want to use.



3 Hold the memory card with the arrow facing up and toward the memory card slot.

4 Carefully slide the memory card into the slot until it clicks in place.
Do not force the card into the slot.

If the memory card does not go into the slot easily, remove it gently and verify you are inserting it in the proper direction.

Removing a Memory Card

The correct way to remove a memory card from a memory card slot varies, depending on the media or slot. Use care when removing a memory card to avoid damage to the slot or card.

! Do not remove a memory card while the Media Access indicator light is on. The card or its data may become damaged.

To remove a Secure Digital (SD), MultiMediaCard, SmartMedia, or xD-Picture Card media

1. Flip the upper front panel down, using your fingertip.
2. Check that the Media Access indicator is off.
3. Press the extended part of the memory card, causing it to extend out from the slot.
4. When the card extends, carefully pull it out of the slot.

To remove a CompactFlash media

1. Flip the upper front panel down, using your fingertip.
2. Check that the Media Access indicator is off.
3. Firmly grasp the extended part of the memory card.
4. Carefully pull it out of the slot.

Using the Internet

Setting Up a Dial-up Internet Connection

Before you can connect to the Internet, you need to connect your computer to a telephone line via a telephone cable (not supplied). Once you set up your telephone cable, you're ready to connect to the Internet.

For details of telephone cable connections, see **Connecting the Telephone and Modem** **(page 25)**.

To set up a dial-up connection to the Internet

1. Click **Start**, point to **All Programs**, **Accessories**, **Communications**, and click **New Connection Wizard**. The **New Connection Wizard** appears.
2. Click **Next**. If the **Location Information** window appears, follow the on-screen instructions.
3. If it is not already selected, click to select **Connect to the Internet**, and click **Next**.
4. Follow the on-screen instructions.

Using Peripheral Devices

You can add functionality to your computer by using the various ports on the computer.

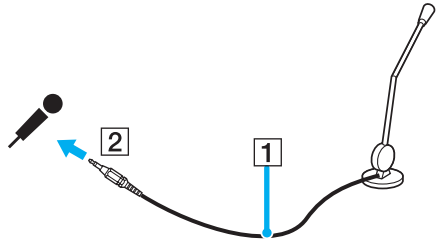
❑ **Connecting an External Microphone (page 74)**
❑ **Connecting a VCR or Camcorder (page 75)**
❑ **Connecting a Universal Serial Bus (USB) Device (page 77)**
❑ **Connecting a Printer (page 79)**
❑ **Connecting an i.LINK Device (page 81)**
❑ **Connecting to a Network (LAN) (page 83)**

Connecting an External Microphone

If you need to use a sound input device (for example, to chat on the Internet) you need to plug in an external microphone.

To connect an external microphone

Plug the microphone cable (1) into the microphone jack (2) .



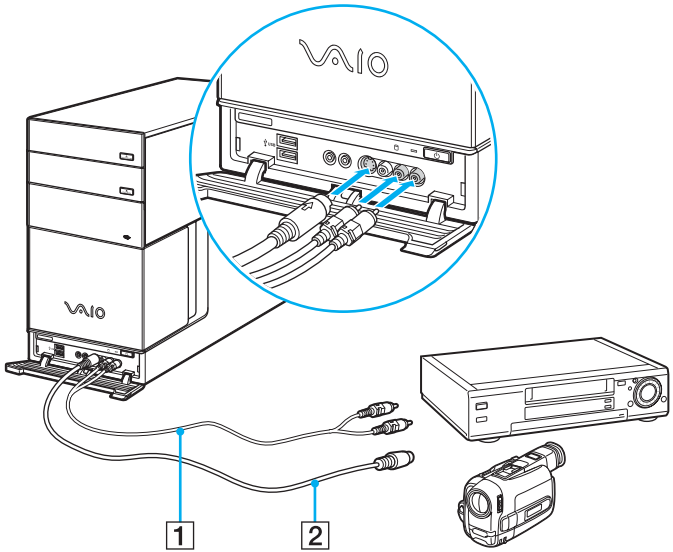
Make sure your microphone is designed for computer use.

Connecting a VCR or Camcorder

Your computer has both audio and video connection capability. You can locate the appropriate connections on the back of the computer or behind the lower bottom panel on the front. You can connect a VCR or camcorder using the Composite Audio In jacks. Your VCR or camcorder may have either standard video or S Video connection capability.

To connect a VCR or camcorder with an audio and an S-Video cable

1. Connect a dual audio cable (1) (not supplied) to the Composite Audio In (L/R) jacks on the computer.
2. Connect the other ends of the dual audio cable to your VCR or camcorder.
3. Connect an S-Video cable (2) (not supplied) directly into the S Video port on the computer.
4. Connect the other end of the S-Video cable into the appropriate port on the VCR or camcorder.



To connect a VCR or camcorder with a stereo A/V dubbing cable

1 Connect a stereo A/V dubbing cable with triple RCA plugs at each end (not supplied) directly into the Composite Video In port, and the Composite Audio In (L/R) jacks on the computer.

2 Connect the other ends of the stereo A/V dubbing cable into the appropriate jacks on the VCR or camcorder.

Connecting a Universal Serial Bus (USB) Device

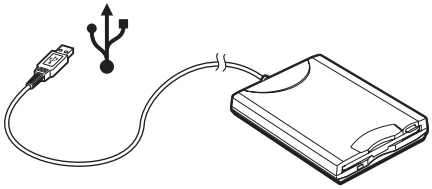
Connecting a USB Floppy Disk Drive

You can purchase a USB floppy disk drive and connect it to your computer.

To connect a USB floppy disk drive

1 Choose the USB port you prefer to use.

2 Plug the USB floppy disk drive cable into the USB port.
Your USB floppy disk drive is now ready for use.



! When using a USB floppy disk drive, do not apply force on the USB port. This may cause a malfunction.

Disconnecting a USB floppy disk drive

You can disconnect a USB floppy disk drive when the computer is on or off. Disconnecting the drive when the computer is in a power saving mode (Standby or Hibernate) may cause the computer to malfunction.

If the computer is off, you can unplug the USB cable directly from the computer.

To disconnect a USB floppy disk drive

1. Close all programs accessing the floppy disk drive.
2. Double-click the **Safely Remove Hardware** icon on the taskbar.
   The **Safely Remove Hardware** window appears.
3. Select the floppy disk drive you want to unplug.
4. Click **Stop**.
   The **Stop a Hardware device** window appears.
5. Make sure the floppy disk drive is selected, and click **OK**.
   A message appears stating it is now safe to remove the hardware device.
6. Remove the floppy disk drive from the computer.

Connecting a Printer

You can connect a Windows-compatible printer to your computer to print documents.

Connecting a Printer Using the USB Port

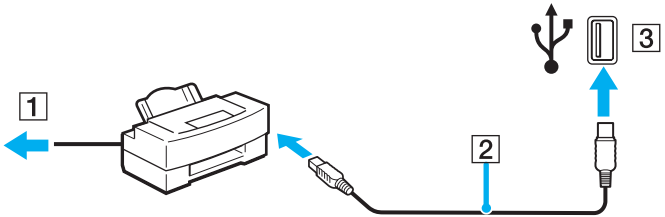
You can connect a USB printer compatible with your version of Windows to the computer.

To connect a printer using the USB port

1 Plug the printer power cord into an AC outlet (1).

2 Choose the USB port (3) you prefer to use.

3 Plug one end of a USB printer cable (2) into the USB port and the other end to your printer.

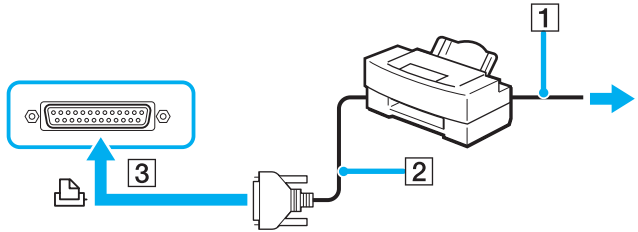


Connecting a Printer Using the Printer Port

To connect a printer using the printer port

1 Plug the printer power cord (1) into an AC outlet.

2 Plug the printer cable (2) supplied with your printer into the printer port (3) on the back of the computer.



Before connecting the printer, turn off the computer and the printer, and unplug the AC adapter and the power cord.

Connecting an i.LINK Device

Notes on connecting i.LINK devices

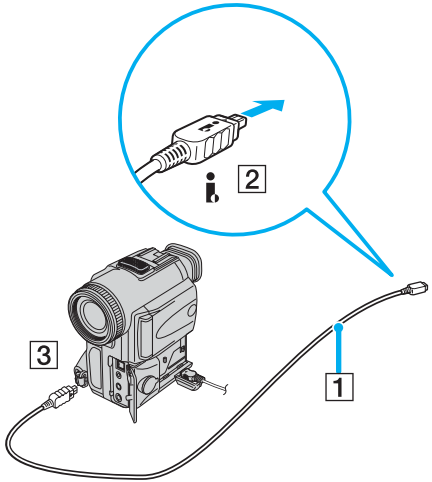
- The computer includes an i.LINK (IEEE1394) port, which you can use to connect to an i.LINK device such as a digital video camera recorder or to connect two VAIO computers in order to copy, delete or edit files.
- The computer is equipped with a 4-pin and a 6-pin i.LINK port. A 4-pin i.LINK port cannot supply power to a connected i.LINK device. A 6-pin i.LINK port can supply power (10V to 12V) to a connected i.LINK device, if the device is equipped with a 6-pin connector. The total power supplied by the 6-pin i.LINK port does not exceed 6 watts.
- The i.LINK port supports transfer rates up to 400 Mbps; however, the actual transfer rate depends on the transfer rate of the external device.
- i.LINK cables compatible with the computer include cables with the following part numbers:
  VMC-IL4415 (a 1.5 meter cable with a 4-pin connector at each end), VMC-IL4408 Series (a 0.8 meter cable with a 4-pin connector at each end).
- The optional i.LINK cables may not be available, depending on the country or area of your residency.
- An i.LINK connection with other compatible devices is not fully guaranteed.
- The i.LINK connection varies depending on the software applications, operating system and i.LINK compatible devices you use. Refer to the manual that came with your software for more information.
- Check the working conditions and OS compatibility of i.LINK-compatible PC peripherals (for example, an HDD or CD-RW drive) before you connect them to the computer.

Connecting a Digital Video Camera Recorder

To connect a digital video camera recorder

1 Plug one end of the i.LINK cable (1) into the i.LINK port (2) on the computer and the other end into the DV In/Out ports (3) on the digital video camera recorder.

2 Launch the **DVgate Plus** software.



On Sony digital video cameras, ports labeled **DV Out**, **DV In/Out** or **i.LINK** are i.LINK-compatible.

The Sony digital video camera recorder shown here is an example; your digital video camera recorder may need to be connected differently.

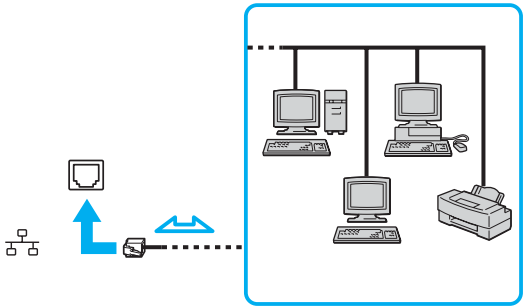
You cannot access the pictures stored on a Memory Stick media when using an i.LINK connection.

Connecting to a Network (LAN)

You can connect your computer to 1000BASE-T/100BASE-TX/10BASE-T-type networks via an Ethernet network cable. Connect one end of an optional network cable to the Network (Ethernet) port on the back of the computer and the other end to your network. For detailed settings and devices needed to connect to the network, see your network administrator.

!

Your computer has a protective sticker covering the Network (Ethernet) port located on the back of the computer. Connect a 10BASE-T, 100BASE-TX, or 1000BASE-T cable to the Network (Ethernet) port. Using an incorrect cable or a phone cable may result in an electric current overload that can cause a malfunction, excessive heat, or fire in the Network (Ethernet) port. For help on connecting to a network, see your network administrator.



The computer can be connected to the network with the default settings.

!
Telephone lines cannot be connected to the Network (LAN) connector on your computer.
If the Network (LAN) connector is connected to the telephone lines mentioned below, high electric current to the connector may cause damage, overheating or fire.

- Home (intercom speakerphone) or business-use telephone lines (multi-line business telephone)
- Public telephone subscriber line
- PBX (private branch exchange)

!
Do not plug a telephone cable into the network port.

Customizing Your VAIO Computer

This section briefly describes how to change the main settings of your computer.

❑ **Setting the Password (page 86)**
❑ **Setting Up Your Computer with VAIO Central (page 88)**
❑ **Using the Power Saving Modes (page 89)**

Setting the Password

Use one of the BIOS functions to set the password.

Once you have set the password, you will have to enter the password after the VAIO logo appears to start your computer. The power-on password will allow you to protect your computer from unauthorized access.

Adding the Power-on Password

!
Once you have set the power-on password, you cannot start the computer without entering the password. Make sure not to forget the password. Write down your password and keep it safe and private from other people.

If you forget the power-on password and need assistance to reset, a password reset fee will be charged, and your computer may need to be sent in for depot service for password reset.

To add the power-on password

1. Turn on the computer.
2. Press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears.
3. Use the ← or → key to select **Security** on the **Boot** menu to display another screen.
4. Use the ← or → key to select the password type that you want to add (**Set Supervisor Password** or **Set User Password**) and press the **Enter** key.
5. At the new password entry prompt, enter a new password and press the **Enter** key.
   The password needs to be at least 6 and at most 19 characters long.
6. At the confirmation prompt, enter the same password once again and press the **Enter** key.
   The password type you selected in step 4 should now be indicated as **Installed**.

Changing/Removing the Power-on Password

To remove the power-on password

1 Turn on the computer.

2 Press the **F2** key when the VAIO logo appears.

3 Enter the current password for **Enter Current Password**:
The BIOS setup screen appears.

4 Use the ← or → key to select **Security** on the **Boot** menu to display another screen.

5 Use the ← or → key to select the password type that you want to remove and press the **Enter** key.

6 At the new password entry prompt, press the **Enter** key without an entry.

7 At the confirmation prompt, press the **Enter** key once again.
The password type you selected in step 5 should now be indicated as **Not Installed**.

To change the power-on password

Remove the current password and then follow the procedure described in **Adding the Power-on Password** **(page 86)** to add a new password.

Setting Up Your Computer with VAIO Central

The **VAIO Central** utility allows you to consult system information and specify preferences for system behavior.

To use VAIO Central

1. Click **Start**, point to **All Programs**, and click **VAIO Central**.
   The **VAIO Central** window appears.
2. Select the desired control item and change the settings.
3. Once finished, click **OK**.
   The setting of the desired item has been changed.

✍
Some of the control items will not be visible if you open **VAIO Central** as a limited user.

Using the Power Saving Modes

In addition to the normal operating mode, which allows you to turn off specific devices, your computer has two distinct power saving modes: Standby and Hibernate.

To set the timer for the computer to automatically enter Standby or Hibernate mode after a certain amount of time, click **Start** and **Control Panel**. Click **Performance and Maintenance** and **Power Options**, and then change the settings under **Power Schemes**.

Using Normal Mode

This is the normal state of the computer when it is in use. To save power while not working, you can turn off a specific device such as the LCD or the hard disk.

Using Standby Mode

Standby mode turns off the LCD screen and sets the hard disk and the CPU to a low power consumption mode. The orange Standby indicator light illuminates in this mode.

To activate Standby mode

1 Click **Start** and then **Turn Off Computer**.

2 Click **Stand By**.

Alternatively, you can press the Standby button on the keyboard to put the computer in Standby mode.

To return to Normal mode

Press any key.

If you press the power button for more than four seconds, the computer will switch off automatically. You will lose any unsaved data.

When the computer is in Standby mode, you cannot insert a disc.

The computer comes out of Standby mode quicker than out of Hibernate mode.

Standby mode uses more power than Hibernate mode.

If the computer is not used for more than 20 minutes, it will enter Standby mode. To avoid this, you can change the Standby mode settings.

Using Hibernate Mode

In Hibernate mode, the state of the system is saved on the hard disk and power is turned off. The VAIO power indicator is off in this mode.

To activate Hibernate mode

1 Click **Start** and then **Turn Off Computer**.

2 Click **Hibernate**.

To return to Normal mode

Turn on the computer by pressing the power button.

The computer returns to its previous state.

! If you press the power button for more than four seconds, the computer will switch off automatically.

✍ If you do not use the computer for a long period of time, put the computer into Hibernate mode. This power saving mode saves you the time of shutting down or resuming.

When the computer is in Hibernate mode, you cannot insert a disc.

Hibernate mode requires more time than Standby mode to be activated.

It takes more time to return to Normal mode from Hibernate mode than from Standby mode.

Hibernate mode uses less power than Standby mode.

! Do not move the computer until the VAIO power indicator turns off.

Upgrading Your VAIO Computer

Your computer and memory modules use high precision components and electronic connectors technology. To avoid the invalidation of your guarantee due to mishandling, we recommend that:

- You contact your dealer to install a new memory module.
- You do not install it yourself, if you are not familiar with upgrading memory on a computer.
- You do not touch the connectors on the memory module.

For the type of module and amount of memory installed on your model, see the online **Specifications**.

For assistance, contact an authorized Sony Service Center. To find the nearest center or agent, visit the Sony online support Web site.

- **Before Upgrading Your Computer (page 93)**
- **Opening and Closing the Computer (page 94)**
- **Adding and Removing Memory (page 97)**
- **Installing an Add-on Card (page 103)**
- **Replacing the Lithium Battery (page 106)**
- **Installing the Hard Disk Drive (page 109)**
- **Installing the IDE Device (page 118)**

Before Upgrading Your Computer

The upgrading procedures described in this section assume that you are familiar with the general terminology associated with personal computers, safety practices, required regulatory compliances, and the modification of electronic equipment.

Disconnect the computer from its power source and from telecommunications links, networks, or modems before you open the computer or follow any procedures in this section.

!
Failure to disconnect the computer from its power source may result in personal injury or equipment damage. Always turn the power off before you open the computer or connect peripheral equipment. Otherwise, damage may occur to the integrated circuits.

Your model may not be equipped with all of the hardware features mentioned in this section. The interior hardware configuration of the computer may vary from the illustrations, depending on the model you purchased.

✍
You may need to temporarily remove add-on cards or other components that may be near the slot cover you plan to remove.

!
Electrostatic discharge (ESD) can damage disk drives, add-on cards, and other components. Follow the procedures described here only at an ESD workstation. If such a station is not available, do not work in a carpeted area and do not handle materials that produce or hold static electricity (for example, cellophane wrappers). Ground yourself by maintaining continuous contact with an unpainted metal portion of the chassis while performing the procedure.

Opening and Closing the Computer

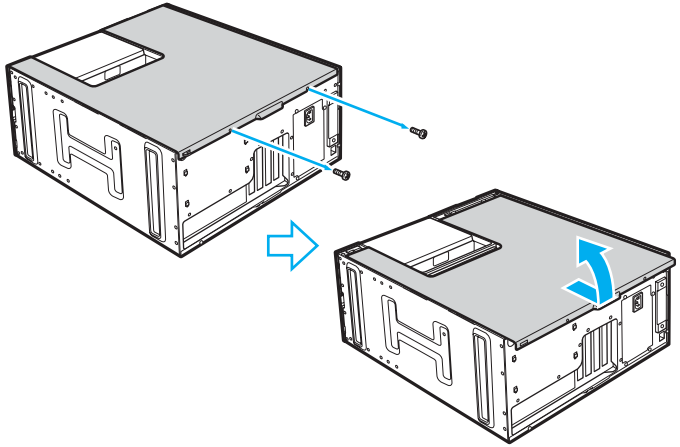
When you access memory modules, add-on cards, and the lithium battery inside your computer, you need to remove and replace the side panel beforehand and afterward.

Opening the Computer

!
If you remove the side panel immediately after you shut down the computer, the internal components may be too hot to touch. Wait about one hour to let the components cool down before you attempt to remove the panel.

To remove the side panel

1. Shut down the computer and turn off all peripheral devices, such as a printer.
2. Unplug the computer and disconnect any peripheral devices.
3. Place the computer on its left side.
4. Unscrew the two screws on the back of the computer.
5. Slide the side panel toward the back of the computer, lift the panel, and set it aside.



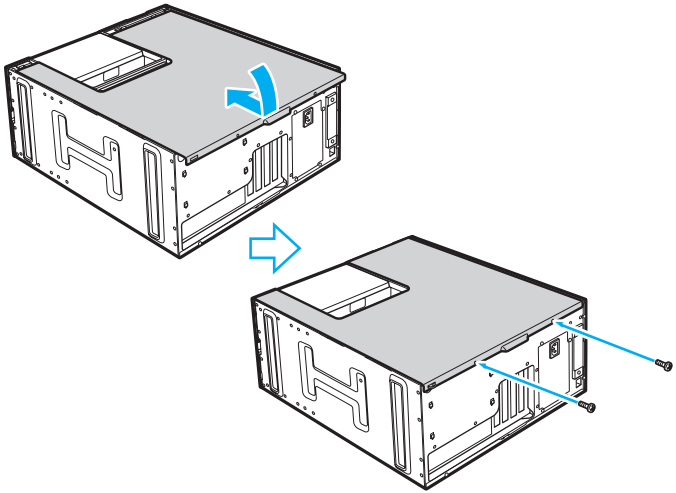
Closing the Computer

To replace the side panel

1 Insert the tabs on the bottom of the side panel diagonally into the tracks on the bottom edge of the chassis frame.

2 Slide the side panel toward the front of the computer.

3 Tighten the two screws on the back of the computer to secure the side panel.



Adding and Removing Memory

If you want to expand the functionality of your computer, you can increase the memory by installing optional memory modules. Before you upgrade your computer's memory, read the notes and procedures in this section. The number of available slots depends on your computer's hardware configuration.

Notes on adding/removing memory modules

- Be careful when changing memory. Improper installation of memory modules may cause damage to your system. This damage may void your manufacturer's warranty.
- Only use memory modules that are compatible with the computer. If a memory module is not detected by the computer or Windows becomes unstable, contact your sales dealer or the manufacturer of your memory module.
- Electrostatic discharge can damage electronic components. Before touching a memory module, ensure the following:
  - The procedures described in this document assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.
  - Turn off the computer and disconnect the system from its power source and from any telecommunication links, networks, or modems before you open the computer. Failure to do so may result in personal injury or equipment damage.
  - Electrostatic Discharge (ESD) can damage memory modules and other components. Install the memory module only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by maintaining contact with an unpainted metal portion of the chassis while performing the procedure.
  - Do not open the memory module package until you are ready to change the module. The package protects the module from ESD.

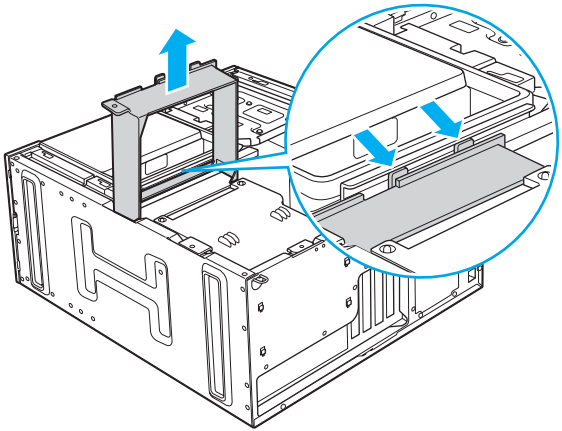
- Use the special bag delivered with the memory module or wrap the module in aluminum foil to protect it from electrostatic discharge.
- Introducing any liquids or any foreign substances or objects into the memory slots, or other internal components of the computer, will result in damage to the computer and any repair costs will not be covered by the warranty.
- Do not place the memory module in places subject to:
  - Heat sources such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature of more than 95°F (35°C) or less than 41°F (5°C)
  - High humidity
- Handle the memory module with care. To avoid injuries to your hands and fingers, do not touch the edges of the components and circuit boards inside the computer.

Removing and Installing a Memory Module

To change or add a memory module

1 Remove the side panel.
See **Opening the Computer** **(page 94)** for the detailed instructions.

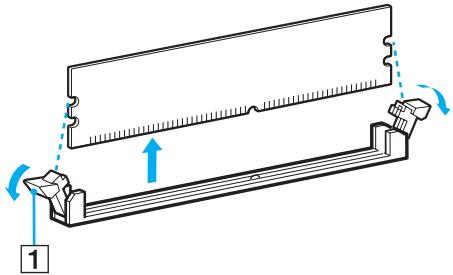
2 Push the tabs on the bracket and lift the bracket out of the computer.



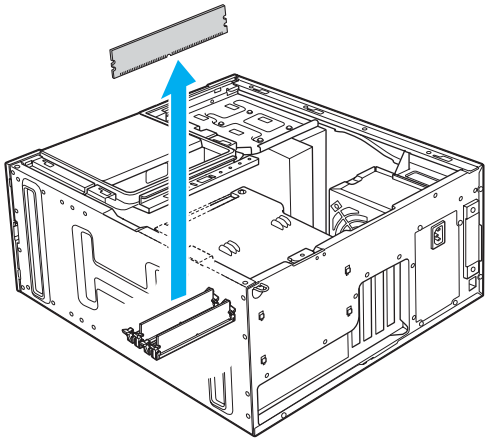
3 Touch a metal object (such as the chassis frame) to discharge static electricity.

4 Locate the memory module(s) you wish to remove.

5 Push down on the latches (1), located on both sides of the module, to gently eject it from the slot.



6 Grasp the memory module by the sides and remove from the computer. Store the module in a static-free bag.

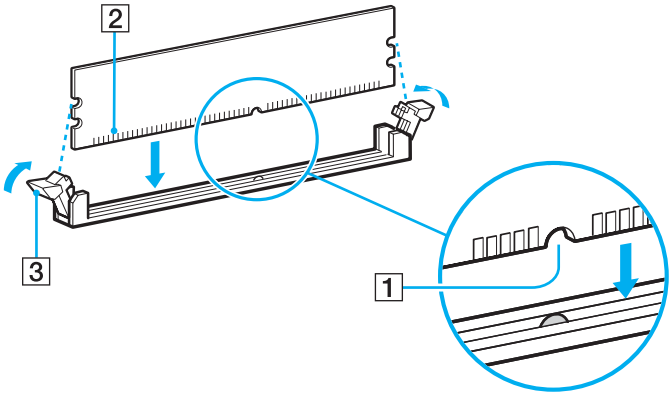


7 Remove the memory module from its anti-static package, handling it by the edges.

8 Locate the center notch (1) on the bottom edge of the memory module and align it to the center bump in the open module slot.

9 Firmly insert the lower edge of the module (2) into the slot by pressing down evenly against the module's upper corners.

10 The side latches (3) snap into position, holding the memory module in place.



! To avoid damaging a memory module or the memory module slot, move the side latches slightly outward to relieve pressure.

11 Replace the bracket and tighten the screws.

12 Replace the side panel.
See **Closing the Computer** (page 96) for the detailed instructions.

Viewing the Amount of Memory

To view the amount of memory

1. Turn on the computer.
2. Click **Start**, point to **All Programs**, and click **VAIO Central**.
3. Click the **System Information** tab in the **VAIO Central** window.
4. Double-click the **System Information** folder.
5. Double-click the **System Information** icon.
   You can view the amount of system memory. If the additional memory does not appear, repeat the whole procedure and restart the computer.

Installing an Add-on Card

Your computer may have one or more open expansion slots depending on the model configuration. An expansion slot enables you to install add-on cards to expand the functionality of your computer. The length of the add-on card should not exceed 9.05 inches.

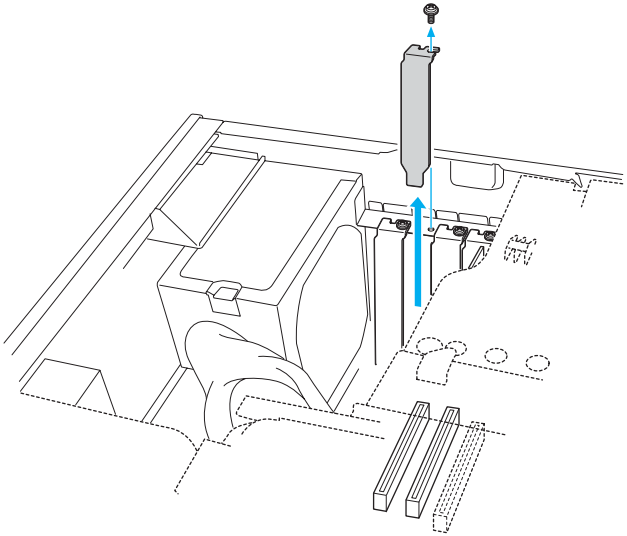
✍
Add-on card configuration varies by model. Some models, such as Configure-to-Order (CTO) computers, may have all expansion slots filled.

!
Observe the proper safety precautions when you add cards to your Sony computer. See **Before Upgrading Your Computer** **(page 93)**.

To install an add-on card

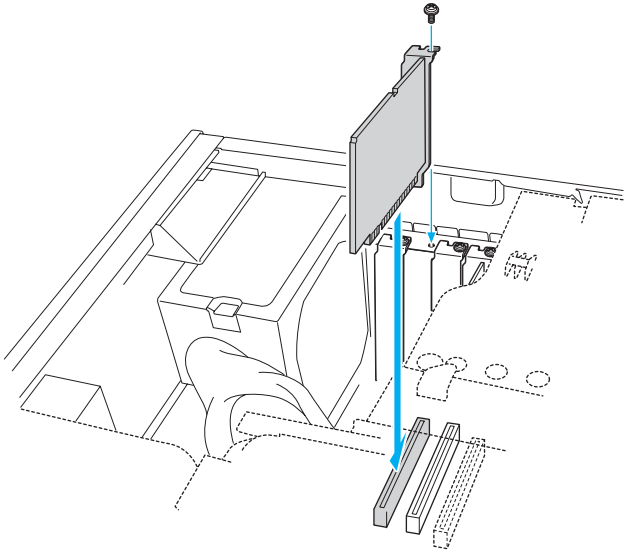
1 Remove the side panel.
See **Opening the Computer** **(page 94)** for the detailed instructions.

2 Locate an available expansion slot. Remove the slot cover's screw, and then remove the slot cover.



!
When removing a slot cover, be careful not to damage components on the system board or add-on cards. You may need to temporarily remove add-on cards or other components that may be next to the slot cover you want to remove.

3 Insert the add-on card into the expansion slot and secure it with the screw from the expansion slot cover.



4 Replace the side panel.
See **Closing the Computer** **(page 96)** for the detailed instructions.

Replacing the Lithium Battery

The lithium battery starts to weaken after several years and the system settings, such as the date and time stored in CMOS RAM, may become inaccurate. Replace the lithium battery when this occurs.

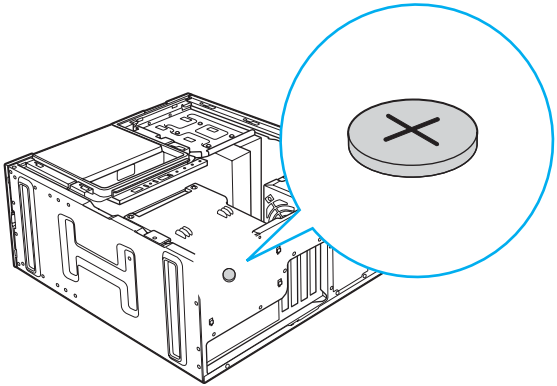
! There is danger of the battery exploding if it is replaced incorrectly. Replace the battery only with a CR2032-type lithium battery.

Replacing the Lithium Battery

To replace the lithium battery

1. Write down any changes you may have made to the settings in the BIOS Setup utility.
2. Remove the side panel.
   See **Opening the Computer** **(page 94)** for the detailed instructions.
3. If necessary, remove any cables, add-on cards, or other components to access the lithium battery.

4 Remove the old battery and install the new battery with the plus (+) side facing up.



5 Replace the side panel.
See **Closing the Computer** (page 96) for the detailed instructions.

The values stored in the CMOS memory are now reset to the factory default values. Run the Setup utility to reset the date, time, passwords, and other changes you may have made to the BIOS settings. If you do not wish to customize your BIOS settings, do not run the Setup utility.

!
Dispose of the lithium battery properly. In some areas, the disposal of lithium batteries in household or business trash may be prohibited. You can return your unwanted lithium batteries to your nearest Sony Service Center or Factory Service Center. To locate a Service Center near you, visit the Sony online support Web site.

Resetting the Computer's Date and Time

To reset the computer's date and time

1. Double-click the time readout displayed on the taskbar.
   The **Date and Time Properties** window appears.
2. From the **Date & Time** tab, change the settings as desired.
3. Click **Apply**.
4. Click **OK**.

Installing the Hard Disk Drive

Your computer may be equipped with open internal bays to hold additional 3.5-inch hard disk drives. See the online **Specifications** for details about the installed hard disk drive.

Review the manufacturer's information provided with your new hard disk drive before attempting to install it in the computer.

Certain models may already have additional hard disk drives installed that support the Redundant Array of Independent Disks (RAID) technology.

The installation information provided in this section may not apply if you have purchased a model that supports RAID.

Replacing the Original Hard Disk Drive

If you replace the original, factory-installed hard disk drive, you may need to correct the drive mapping, and/or create a VAIO Recovery Media Kit. Visit the Sony online support Web site for more information.

About drive mapping

When a new hard disk drive is installed, the original drive mapping* may be changed. The identified drives, including those for removable media, may not reflect correct drive/icon associations. For more information on how to correct the drive mapping, visit the Sony online support Web site.

* Drive mapping refers to the assignment of an identifying letter to a specific drive, such as Drive C or Drive D which identify the original hard disk drive.

About hard disk drive recovery

When you replace the original hard disk drive, the preinstalled **VAIO Recovery** utility cannot restore the drive partitions, operating system, or original software programs. Before replacing the hard disk drive, create a VAIO Recovery Media Kit or purchase a kit from Sony.

Your computer is not supplied with **System or Application Recovery CDs**. Use the **VAIO Recovery** utility to recover the computer's operating system and preinstalled software programs.

To start the VAIO Recovery utility

1. Click **Start** and point to **All Programs** and **VAIO Recovery**.
2. Click **VAIO Recovery**.

Observe the proper safety precautions when you upgrade your Sony computer. See **Before Upgrading Your Computer** **(page 93)**.

Drive letter assignment

When a new hard disk drive is installed, an identifying drive letter is assigned. The drive letter assignment becomes effective after you register for the first time or after recovering your computer with the **VAIO Recovery** utility.

The **Click to DVD** software creates a new folder location on the new hard disk drive. This new folder is the default location to save files created with the **Click to DVD** software.

- If the Microsoft Windows operating system identifies the new hard disk drive as drive D, the **Click to DVD** software saves its files to a new folder on the new drive D.
- If the Windows operating system assigns another letter to the new hard disk drive, such as drive E or J, the **Click to DVD** software creates the new save folder on the new drive.

When you start the **Click to DVD** software for the first time, after recovering the computer or installing a new hard disk drive, the software automatically creates a new save folder on the new drive.

Notes on installing a new hard disk drive

- If the computer is equipped with a Serial ATA (SATA) hard disk drive, you do not need to configure the new drive.
- The instructions provided here do not apply, if you want to set up a RAID configuration.
- Follow the configuration instructions supplied with the new hard disk drive.

Installing an Additional Hard Disk Drive

You can install up to four SATA hard disk drives to the internal hard disk drive bay.

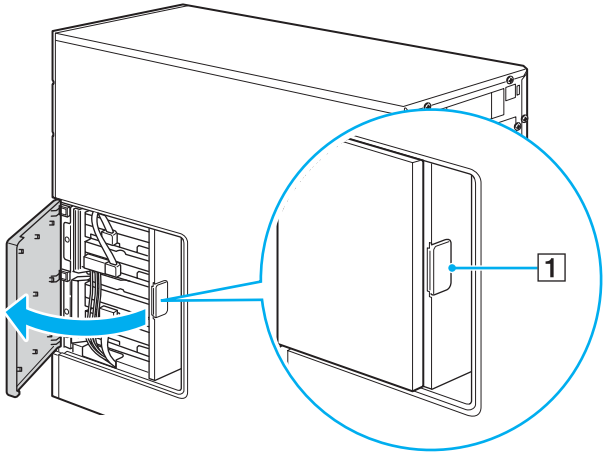
!
If you remove the hard disk cover immediately after you shut down the computer, the internal components may be too hot to touch. Wait about one hour to let the components cool down before you attempt to remove the panel.

To install an additional hard disk drive

1 Shut down the computer and turn off all peripheral devices, such as a printer.

2 Unplug the computer and disconnect any peripheral devices.

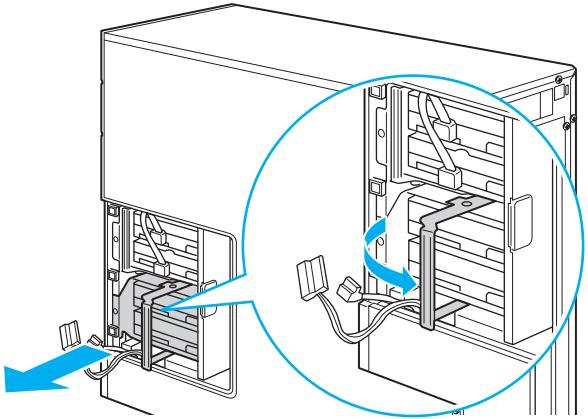
3 Push the button (1) to open the hard disk cover, remove the panel, and set it aside.



4 Detach the power and interface cables from the original hard disk drive that is preinstalled in the computer.

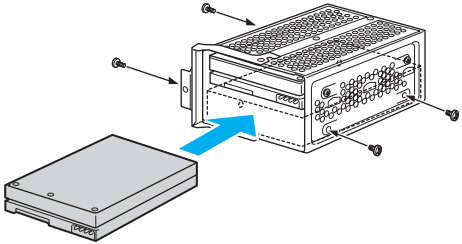
5 Pull the drive holder handle straight out from the chassis to unlock the drive holder.

6 Grasp the handle and slide the drive holder out.



7 Slide a new drive into the drive holder and align the holes on each side of the drive bay.

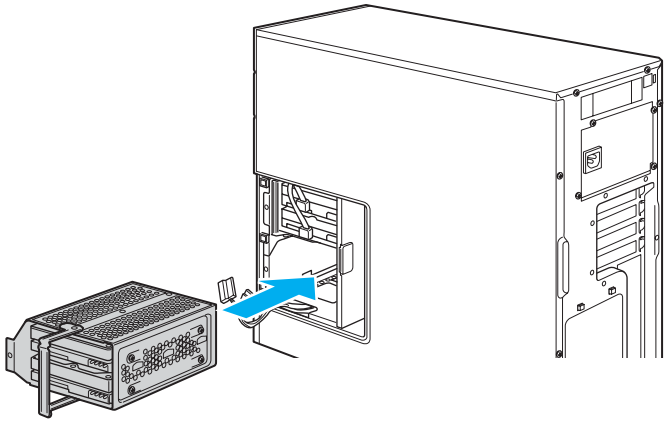
8 Secure the drive to the drive holder with screws, through the holes on each side of the drive holder.



The new hard disk drive is supplied with the necessary screws. Do not overtighten these screws when securing the drive to the drive holder.

9 Align the drive holder with the tracks on the inside of the chassis. Slide the drive holder in completely.

10 Push the drive holder handle back to lock the drive into position.



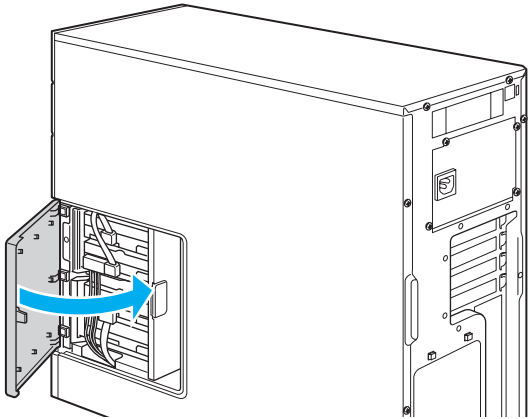
11 Connect the power connectors to the original and new hard disks.

12 Connect the internal SATA cables to the hard disks as follows:

Connect the internal SATA cables:	**To the hard disks in:**
Red PORT0 cable	Top drive bay
White PORT1 cable	2nd drive bay
Blue PORT2 cable	3rd drive bay
Orange PORT3 cable	Bottom drive bay

!
Make sure to use the internal SATA cables. Commercially available SATA cables with the straight-head connector may be accidentally unplugged when you open or close the hard disk cover.

13 Replace the hard disk cover.



Identifying the Additional Hard Disk Space

When you initialize the new hard disk, it must be configured as an extended partition in Windows NT file system (NTFS) format.

To identify the additional hard disk space

1. Log on to Windows as a user with administrator rights.
2. Click **Start** and right-click **My Computer**.
3. Select **Manage** from the menu.
   The **Computer Management** window appears.
4. Under the file directory on the right, double-click **Storage** and then **Disk Management**.
5. Right-click on the newly installed, unformatted hard disk (Disk label identified with red marking) and select **Initialize Disk** from the menu.
6. Click on the allocated area of the disk.
7. Right-click the area and select **New Partition** from the menu.
   The **New Partition** wizard window appears.
8. Follow the on-screen instructions to complete the process.

The Windows XP operating system recognizes the new hard disk drive and applies the NTFS format.

Installing the IDE Device

Your computer may be equipped with open IDE device bays to hold 5-inch IDE devices. See the online **Specifications** for details about the installed IDE devices.

Notes on installing the IDE device

- Be careful when installing an IDE device. Improper installation of the device may cause damage to your system. This damage may void your manufacturer's warranty. If you have any questions about installing the IDE device, visit the Sony online support Web site.
- Keep any foreign objects, for example metal objects, out of the computer. If such an object enters and remains in the chassis when you install an IDE device, turning on the computer may cause fumes. Make sure to remove foreign objects, if any, and replace the covers and panels before you turn on the computer.
- Keep your hand away from electronic components on the internal boards of the computer. Some components are sensitive to external force and static electricity and easy to fail.
- Make sure to configure the IDE device as Slave. For detailed instructions, see the manual that came with your IDE device.
- Some IDE devices may not be compatible. Ask the dealer or manufacturer of your IDE device for compatibility with the VAIO computer.
- Installation of the IDE device must be carried out at your own risk. Sony Corporation assumes no liability for any defects of the computer arising out of your installation of the IDE device and a fee will be charged for such repair.

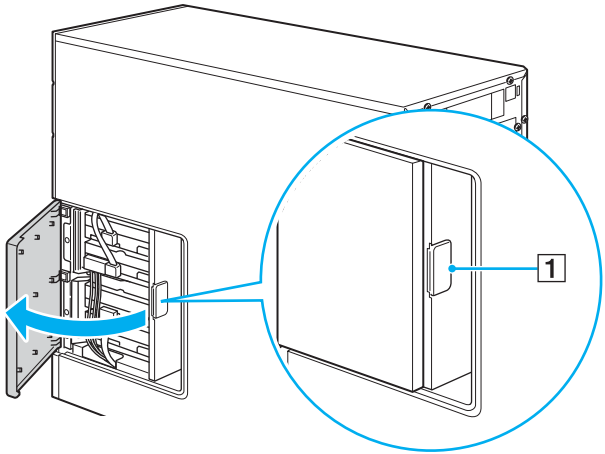
To install the IDE device

!
If you remove the covers and panels immediately after you shut down the computer, the internal components may be too hot to touch. Wait about one hour to let the components cool down before you attempt to remove the panel.

1 Shut down the computer and turn off all peripheral devices, such as a printer.

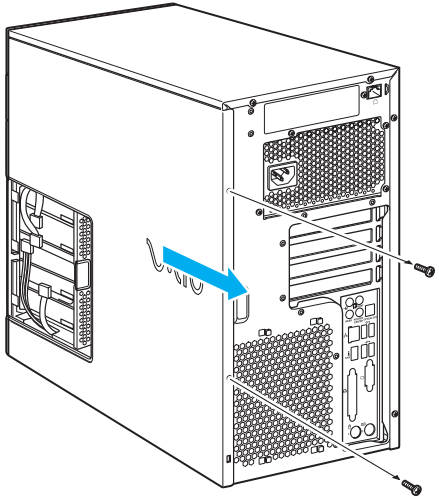
2 Unplug the computer and disconnect any peripheral devices.

3 Push the button (1) to open the hard disk cover, remove the cover, and set it aside.

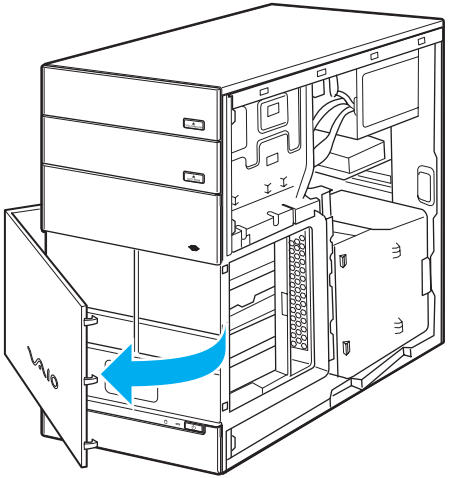


4 Unscrew the two screws on the back of the computer.

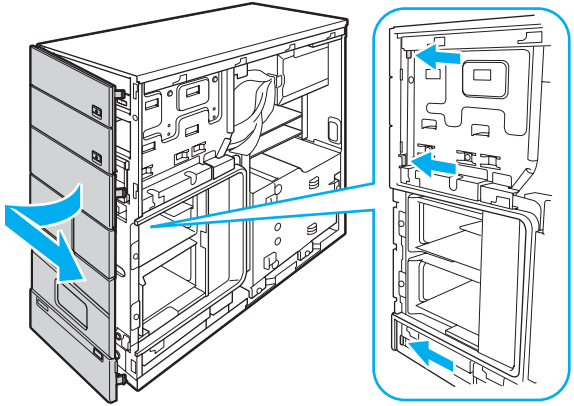
5 Slide the right side panel toward the back of the computer, remove the panel, and set it aside.



6 Remove the front cover and set it aside.

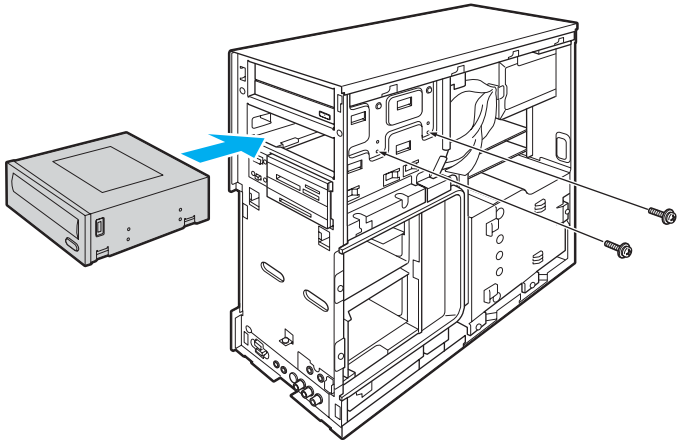


7 Disengage the three tabs on the back of the front panel, remove the panel, and set it aside.



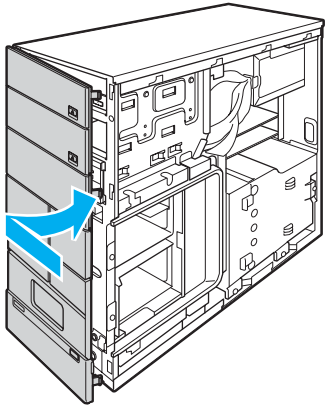
8 Slide an IDE drive into the IDE device bay and align the holes on each side of the device bay.

9 Secure the device to the bay with screws, through the holes on each side of the device bay.

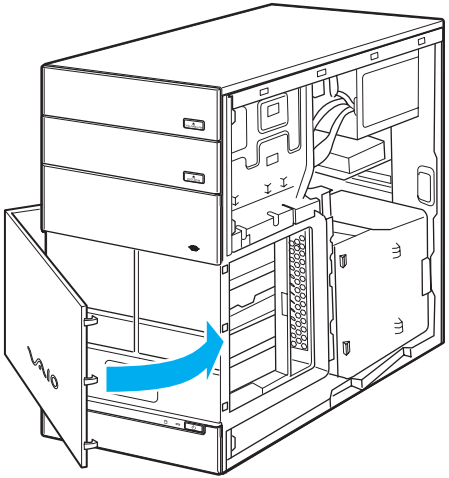


10 Connect the IDE and power cables to the IDE device

11 Replace the front panel.

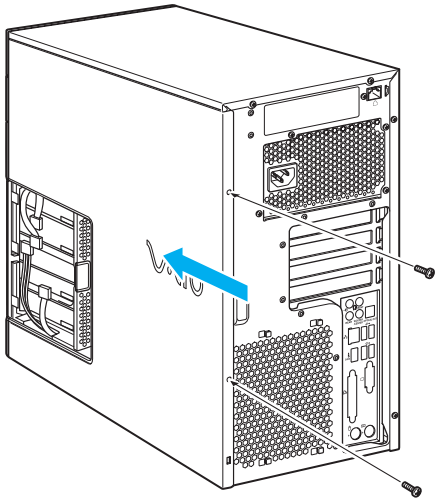


12 Replace the front cover.

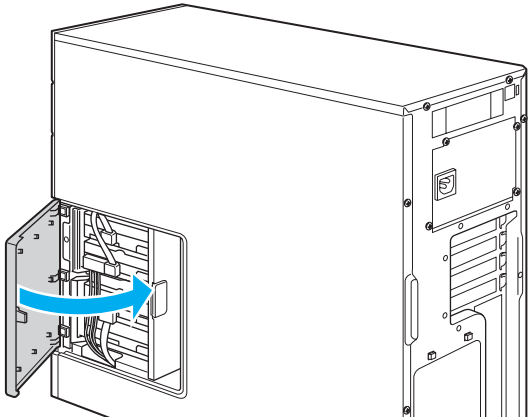


13 Slide the right side panel toward the front of the computer.

14 Tighten the two screws on the back of the computer to secure the panel.



15 Replace the hard disk cover.



Precautions

This section describes safety guidelines and precautions to help you protect your computer from potential damage.

❑ **On Handling the LCD Screen (page 129)**
❑ **On Using the Power Source (page 130)**
❑ **On Handling Your Computer (page 131)**
❑ **On Handling Floppy Disks (page 133)**
❑ **On Handling Discs (page 134)**
❑ **On Using Headphones (page 134)**
❑ **On Handling Memory Stick Media (page 135)**
❑ **On Handling the Hard Disk (page 136)**

On Handling the LCD Screen

- Do not leave the LCD facing the sun. This could damage the LCD. Be careful when using the computer near a window.
- Do not scratch the LCD or exert pressure on it. This could cause a malfunction.
- Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
- A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The residual image disappears in a while. You can use a screen saver to prevent residual images.
- The screen becomes warm during operation. This is normal and does not indicate a malfunction.
- The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.
- Avoid rubbing the LCD screen. This could damage the screen. Use a soft, dry cloth to wipe the LCD screen.

On Using the Power Source

- See the online **Specifications** to check the power operation of your model.
- Do not share the AC outlet with other power-consuming equipment, such as a photocopier or shredder.
- You can purchase a power strip with a surge protector. This device prevents damage to the computer caused by sudden power surges, in an electrical storm, for example.
- Do not place heavy objects on the power cord.
- To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Unplug the computer from the AC outlet if you are planning to not use the computer for a long time.
- Make sure that the AC outlet is easily accessible.
- Use the power cord supplied with the computer or genuine Sony products. Do not use any other power cord as it may cause a malfunction.

On Handling Your Computer

- Clean the cabinet with a soft cloth, which is dry or lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as these may damage the finish of the computer.
- If you drop a solid object or any liquid onto the computer, shut down the computer and then unplug it. You may want to have the computer checked by qualified personnel before operating it again.
- Do not drop the computer or place heavy objects on top of the computer.
- Do not place the computer in a location subject to:
  - Heat sources, such as radiators or air ducts
  - Direct sunlight
  - Excessive dust
  - Moisture or rain
  - Mechanical vibration or shock
  - Strong magnets or speakers that are not magnetically shielded
  - Ambient temperature of more than 95°F (35°C) or less than 41°F (5°C)
  - High humidity
- Do not place electronic equipment near the computer. The electromagnetic field of the computer may cause a malfunction.
- Provide adequate air circulation to prevent internal heat from building up. Do not place the computer on porous surfaces such as rugs or blankets, or near material such as curtains or draperies that may block its ventilation slots.
- The computer uses high-frequency radio signals and may cause interference to radio or TV reception. If this occurs, relocate the computer a suitable distance away from the set.
- Use only specified peripheral equipment and interface cables; otherwise, problems may occur.

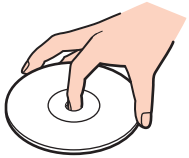
- Do not use cut or damaged connection cables.
- If the computer is brought directly from a cold location to a warm one, moisture may condense inside the computer. In this case, allow at least one hour before turning on the computer. If any problems occur, unplug the computer and contact an authorized Sony Service Center. To find the nearest center or agent, visit the Sony online support Web site.
- Make sure you disconnect the power cord before cleaning the computer.
- To avoid losing data if the computer is damaged, back up your data regularly.

On Handling Floppy Disks

- Do not open the shutter manually or touch the surface of the floppy disk.
- Keep floppy disks away from magnets.
- Keep floppy disks away from direct sunlight and other sources of heat.
- Keep the floppy disk away from any liquid. Do not let the floppy disk get wet. When you are not using the floppy disk, always remove it from the floppy disk drive and use a storage case.
- If the floppy disk comes with a label, make sure that the label is properly attached. If the edge of the label is curled up, the label may stick to the inside of the floppy disk drive and cause a malfunction or damage your floppy disk.

On Handling Discs

- Do not touch the surface of the disc.
- Do not drop or bend the disc.
- Fingerprints and dust on the surface of a disc may cause read errors. Always hold the disc by its edges and central hole, as shown below:



- Proper care of the disc is essential to its continuous reliability. Do not use solvents (such as benzine, thinner, alcohol, commercially available cleaners, or anti-static spray) which may cause damage to the disc.
- For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
- If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.
- Never put stickers on discs. This will affect the use of the disc irreparably.

On Using Headphones

Preventing hearing damage – Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

On Handling Memory Stick Media

- Do not use the media in locations that are subject to static electricity or electrical noise.
- Do not touch the Memory Stick media connector with your finger or metallic objects.
- Use only the label supplied with the Memory Stick media as a label.
- Do not bend, drop, or apply strong shock to the Memory Stick media.
- Do not disassemble or modify Memory Stick media.
- Do not let Memory Stick media get wet.
- Do not use or store Memory Stick media in a location subject to:
  - Extremely high temperatures, such as in a car parked in the sun
  - Direct sunlight
  - High humidity or
  - Corrosive substances
- Use the storage case supplied with the Memory Stick media.

On Handling the Hard Disk

The hard disk has a high storage density and reads or writes data in a short time. However, it can be easily damaged by mechanical vibration, shock or dust.

Although the hard disk has the internal safety device to prevent losing data due to mechanical vibration, shock or dust, you should be careful when handling the computer.

To avoid damaging your hard disk

- Do not subject the computer to sudden movements.
- Keep the computer away from magnets.
- Do not place the computer in a location subject to mechanical vibration or in an unstable position.
- Do not move the computer while the power is on.
- Do not turn off the power or restart the computer while reading or writing data to disk.
- Do not use the computer in a place subject to extreme changes in temperature.

If the hard disk is damaged, the data cannot be restored.

Troubleshooting

This section describes how to solve common problems you might encounter when using your computer. Many problems have simple solutions. Try these suggestions before visiting the Sony online support Web site at http://www.sony.com/pcsupport for customers in USA, at http://www.sony.ca/support for customers in Canada, or at http://www.sony.com/lapcsupport for customers in Latin American countries or areas.

- **Computer** (page 138)
- **System Security** (page 145)
- **Internet** (page 147)
- **CDs and DVDs** (page 149)
- **Display** (page 153)
- **Printing** (page 154)
- **Microphone** (page 155)
- **Mouse** (page 156)
- **Speakers** (page 158)
- **Keyboard** (page 160)
- **Floppy Disks** (page 161)
- **Audio/Video** (page 162)
- **Memory Stick Media** (page 163)
- **Peripherals** (page 164)

Computer

What should I do if my computer won't start?

- Make sure the computer is securely plugged into a power source and turned on. Make sure the VAIO power indicator shows the power is on.
- Make sure the optical disc drive (if applicable) is empty.
- If the computer is plugged into a power strip or uninterruptible power supply (UPS), make sure the power strip or UPS is plugged into a power source and turned on.
- Confirm that the external monitor is plugged into an appropriate power source and turned on.
- Make sure the brightness and contrast controls are adjusted correctly.
- Condensation may cause the computer to malfunction. If this occurs, do not use the computer for at least one hour.
- Remove any extra memory modules you may have inserted since purchase.
- Confirm that the computer is not in Standby mode by pressing any key on the keyboard.

What should I do if a BIOS error appears when my computer starts?

If the message "Press F2 to setup" appears at the bottom of the screen

1. Press the **F2** key when the VAIO logo appears.
   The BIOS setup screen appears.
2. Press the ➡ key to select the **Exit** menu.
3. Press the ⬇ key to select **Load Optimal Defaults**.
4. Press the **Enter** key.
   The **Load Defaults?** window appears.
5. Press the **Y** key on the keyboard and press the **Enter** key.
6. Select **Exit Save Changes** and press the **Enter** key.
   The **Exit Saving Changes?** window appears.
7. Press the **Y** key on the keyboard.
   The computer restarts.

If this occurs on a regular basis, contact an authorized Sony Service Center. To find the nearest center or agent, visit the Sony online support Web site.

What should I do if VAIO power indicator lights but my screen does not display anything when I turn on my computer?

If nothing still appears on your screen after a while

1. Press the power button for more than four seconds to check that the VAIO power indicator goes out. Then turn on the computer again.
2. If nothing still appears on your screen, unplug the power cord and leave the computer for about a minute. Then plug in the power cord and turn on the computer again.

What should I do if the message "Operating system not found" appears when my computer starts, and why won't Windows start?

- Make sure the computer does not have a "non-bootable" CD or DVD in the optical disc drive (if applicable).
- If a non-bootable media is in the drive:
  1. Remove the media.
  2. Restart the computer and confirm that the Microsoft Windows operating system starts properly.
- If the Windows operating system still does not start, follow these steps to initialize the BIOS:
  1. If there is a CD or DVD in the optical disc drive, remove it.
  2. Turn off the computer.
  3. Remove any peripheral devices connected to the computer.
  4. Restart the computer.
  5. Press the **F2** key when the VAIO logo appears.
     The BIOS setup screen appears.
  6. Press the ➡ key to select the **Exit** menu.
  7. Press the ⬇ key to select **Load Optimal Defaults**.
  8. Press the **Enter** key.
     The **Load Defaults?** window appears.
  9. Press the **Y** key on the keyboard and press the **Enter** key.
  10. Select **Exit Save Changes** and press the **Enter** key.
      The **Exit Saving Changes?** window appears.
  11. Press the **Y** key on the keyboard.
      The computer restarts.

What should I do if my computer or software stops responding?

- It is best to turn off the computer using the **Turn Off Computer** option on the Microsoft Windows Start menu, located on the taskbar. Using other methods, including those listed below, may result in loss of unsaved data.
- Click **Start**, point to **Turn Off Computer**, and then click **Turn Off**.
- If the computer does not turn off, press the **Ctrl**+**Alt**+**Delete** keys simultaneously. When the **Windows Task Manager** window appears, click **Turn Off** from the **Shut Down** menu.
  When the **Windows Security** window appears, click **Shut Down**.
- If the computer still does not turn off, press and hold the power button until the computer turns off.
- If the computer stops responding while playing a CD or DVD, press the **Ctrl**+**Alt**+**Delete** keys simultaneously. You can turn off the computer from the **Windows Task Manager**.
- Pressing the **Ctrl**+**Alt**+**Delete** keys simultaneously or turning off the computer with the power button or switch may cause loss of data.
- Remove the power cord.
- Try reinstalling the software.
- Contact the software publisher or designated provider for technical support.

Why won't my computer enter Standby or Hibernate mode?

The computer may become unstable if the operating mode is changed before the computer completely enters Standby or Hibernate.

To restore the computer to normal operating stability

1. Close all open programs.
2. Restart the computer. Follow these steps:
   1. Press the **Windows** key.
   2. Press the **U** key.
   3. Press the **R** key to select restart.
3. If the computer does not restart, follow these steps:
   1. Press the **Ctrl**+**Alt**+**Delete** keys simultaneously.
      The **Windows Task Manager** or **Windows Security** window appears.
   2. When the **Windows Task Manager** window appears, press and release the **Alt** key to highlight the menu bar, press the ➡ key to select **Shut Down**, and then follow step 3 and 4.
      When the **Windows Security** window appears, press the **S** key to shut down.
   3. Press the **Enter** key.
   4. Press the **R** key to select restart.
4. If this procedure does not work, press and hold the power button until the computer turns off.

Why don't my changes appear on the computer screen (LCD)?

You may need to refresh the computer screen. Press and hold the **Windows** key, and press **D** twice.

What should I do if I start my computer and the message "System Disabled" appears and Windows does not start?

If you enter a wrong power-on password three times consecutively, the **System Disabled** message appears and Windows does not start. Press the power button for more than four seconds to check that the VAIO power indicator goes off. Wait for 10 or 15 seconds, then restart the computer and enter the correct password. When entering the password, check that the **Num Lock** indicator and **Caps Lock** indicator are off. If any are lit, press the **Num Lk** key or the **Caps Lock** key to turn off the indicator before entering the password.

What should I do if my game software does not work or it keeps crashing?

- Check the web site of the game if there are any patches or updates to download.
- Make sure you have installed the latest video driver.
- On some VAIO models, the graphics memory is shared with the system. The optimal graphic performance in this case is not guaranteed.

What should I do if I cannot remember the password?

If you have forgotten the password, contact an authorized Sony Service Center to cancel it. A cancellation fee will be charged. To find the nearest center or agent, visit the Sony online support Web site.

Why does it take time before my computer starts?

If Norton Internet Security's Personal Firewall is active, it may take some time before the Desktop screen appears due to network security checkups.

System Security

This section provides information about keeping your computer operating smoothly and protecting against potential threats to the computer's security.

How can I protect my computer against security threats, such as viruses?

The Microsoft Windows operating system is preinstalled on the computer. The best way to protect the computer against security threats, such as viruses, is to download and install the latest Windows updates regularly.

You can get important Windows updates by doing one of the following:

- The Automatic Updates feature — This feature automatically searches for and delivers updates directly to the computer whenever you are connected to the Internet.
- The Windows Updates web site — This site enables you to download computer updates without turning on the **Automatic Updates** feature.

The computer must be connected to the Internet before you can receive updates.

To use the Automatic Updates feature

1. Connect to the Internet.
2. Click the **Automatic Updates** icon on the taskbar.
3. Click **Next**, and follow the on-screen instructions to set up automatic or scheduled updates.

To visit the Windows Updates web site

1 Connect to the Internet.

2 Type **http://windowsupdate.microsoft.com/** in the address bar of your browser.
The **Microsoft Windows Update** and **Security Warning** windows appear.

3 In the **Security Warning** window, start installation and run **Windows Update**.

4 In the **Microsoft Windows Update** window, select an installation type, and follow the on-screen instructions.

How do I keep my antivirus software updated?

You can keep the Norton Internet Security software program current with the latest updates from Symantec Corporation.

To download and install the latest security update

1 Double-click the **Norton Internet Security** icon on the taskbar. If you have not previously registered the antivirus software, a series of information wizards appear.

  1 Follow the on-screen instructions to complete each wizard.

  2 Double-click the **Norton Internet Security** icon again.
  The **Norton Internet Security** window appears.
  If you have previously registered this antivirus software, the Norton Internet Security window automatically appears.

2 Follow the on-screen instructions to select and download updates.

Internet

Why doesn't my modem work?

- ❑ Make sure the telephone cable is securely plugged into the Modem port on the computer and the wall jack.
- ❑ Make sure the telephone cable is working. Plug the cable into an ordinary telephone and listen for a dial tone.
- ❑ Make sure the telephone number the program is dialing is correct.
- ❑ Make sure the software you are using is compatible with the computer's modem. (All preinstalled Sony programs are compatible.)
- ❑ Make sure that the modem is the only device connected to your phone line.
- ❑ Check the following setting:
  1. Click **Start** and then **Control Panel**.
  2. Click **Printers and Other Hardware**.
  3. Click **Phone and Modem Options**.
  4. On the **Modems** tab, check that your modem is listed.
  5. On the **Dialing Rules** tab, check the location information is correct

Why is my modem connection slow?

The computer is equipped with a V.92/ V.90 compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment, such as fax machines or other modems. If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider (ISP), follow these steps:

- Ask your telephone company to verify your telephone line is free of any line noise.
- If your problem is fax-related, make sure there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- If you are having a problem connecting with your ISP, make sure the ISP is not experiencing technical problems.
- If you have a second telephone line, try connecting the modem to that line.

CDs and DVDs

Why does my computer freeze when I try to read a disc?

The disc the computer is trying to read may be dirty or damaged. Follow these steps:

1. Restart the computer by clicking **Start**, **Turn Off Computer**, and **Restart**.
2. Eject the disc from the optical disc drive.
3. Examine the disc for dirt or damage. If the disc is dirty, see **On Handling Discs** **(page 134)** for instructions on how to clean it.

What should I do if the drive tray won't open?

- Make sure the computer is on.
- Press the drive eject button.
- If the drive eject button does not work, click **Start** and then **My Computer**. Right click the optical disc drive icon, and select **Eject** from the shortcut menu.
- If none of the above options work, insert a thin, straight object (such as a paper clip) in the manual eject hole near the drive eject button.
- Try restarting the computer.

What should I do if the optical disc drive isn't playing my CD or DVD properly?

- Make sure the disc was inserted into the optical disc drive with the label facing up.
- Make sure the necessary program(s) is installed according to the manufacturer's instructions.
- If the CD or DVD is dirty or damaged, the computer will stop responding. Follow these steps:
  1. Restart the computer by pressing the **Ctrl+Alt+Delete** keys, and selecting **Restart** from the **Shut Down** menu of the **Windows Task Manager** window.
  2. Remove the CD or DVD from the optical disc drive.
  3. Check the disc for dirt or damage. If you need to clean the disc, see **On Handling Discs** **(page 134)** for instructions.
- If you are playing a CD or DVD and cannot hear sound, follow these steps:
  - Double-click the **Volume icon** on the taskbar, and click to cancel the **Volume Control Mute All** and **Wave Mute** check boxes.
  - Check the volume setting in the audio mixer.
  - If you are using external speakers, check the volume settings on the speakers and the connections between the speakers and the computer.
  - Make sure the CD audio feature is enabled and the correct driver software is installed. Follow these steps:
  1. Click **Start** and then **Control Panel**.
  2. Click **Performance and Maintenance**.
  3. Click **System**.
     The **System Properties** window appears.
  4. Select the **Hardware** tab, and click **Device Manager** in the **Device Manager** box.
     A window with a listing of the computer's hardware devices appears.
     If an "X" or an exclamation point appears on the listed device, you may need to enable the device or reinstall the drivers.

5 Double-click the optical disc drive device to open the submenu.

6 Double-click the listed drive, and select the **Properties** tab.

7 Click to select the **Enable digital CD audio for this CD-ROM device** check box, if it is not selected.
You can confirm the driver software by selecting the **Driver** tab, and clicking **Driver Details**.

8 Click **OK** to close the window.

- Make sure an adhesive label was not attached to the CD or DVD. Adhesive labels can come off while the disc is in the optical disc drive and damage the drive or cause it to malfunction.
- If a region code warning appears, the disc may be incompatible with the optical disc drive. Check the DVD package to make sure the region code is compatible with the optical disc drive.
- If you notice condensation on the computer, do not use the computer for at least one hour. Condensation can cause the computer to malfunction.
- Make sure the computer is running on AC power supply and try the disc again.

What should I do if I cannot write to CD?

- Do not launch any software application or allow any to launch automatically, not even a screen saver.
- Do not use the keyboard.
- Do not use a CD-R/RW disc that has a label affixed to it. This could cause a write error or other damage.

What should I do if I cannot write to DVD?

This Q & A entry applies to selected models only. See the online **Specifications** to see whether your model is equipped with an optical disc drive capable of DVD writing.

- Are you using the correct DVD recordable media?
- Check which DVD recordable format is compatible with the computer's built-in DVD recorder (DVD-R / DVD-RW / DVD+R / DVD+RW). Note the possibility that some brands of DVD recordable media do not work.
- The preinstalled software on the computer does not support copying DVD movies. Macrovision or a similar video protection technology prevents users from copying DVD movies. Copying a DVD movie would be a copyright infringement and therefore illegal.

Display

Why did the computer screen (LCD) go blank?

- The computer screen may go blank if the computer has lost power or has entered a power saving mode (Standby or Hibernate). If the computer is in Standby mode, press any key to activate the computer screen. See **Using the Power Saving Modes** **(page 89)** for more information.
- Make sure the computer is plugged into a power source and is on. The VAIO power indicator on the front panel will be on if the computer is on.

Printing

Why can't I print a document?

- Make sure the printer is on, and the printer cable is securely connected to the ports on the printer and computer.
- Make sure the printer is compatible with the Windows operating system installed on the computer.
- You may need to install the printer driver software before you use the printer. See the manual that accompanied the printer for more information.
- If the printer is not functioning after the computer resumes from a power saving mode (Standby or Hibernate), then restart the computer.
- If the bidirectional communication functions are provided with your printer, disabling the functions on the computer may enable printing. Follow these steps:

  1 Click **Start** and then **Control Panel**.

  2 Click **Printers and Other Hardware**.

  3 Click **Printers and Faxes**.

  4 Right-click an unused printer and select **Properties**.

  5 Click the **Ports** tab.

  6 Click to cancel the **Enable bidirectional support** check box.

  7 Click **OK**.

  This change to the settings disables the bidirectional communication functions of the printer, such as data transfer, status monitoring, and remote panel.

Microphone

Why doesn't my microphone work?

If you are using an external microphone, make sure the microphone is turned on and is properly plugged into the Microphone jack on the computer.

Mouse

What should I do if the computer doesn't recognize the mouse?

- Confirm that the supplied AA batteries are properly installed.
- Press the **CONNECT** button on the mouse and the radio frequency receiver to re-establish the connection between the two devices.

What should I do if the pointer doesn't move when I use the mouse?

- Make sure another mouse is not installed.
- If you are playing a disc, press the **Ctrl+Alt+Delete** keys simultaneously to stop playback and restart the computer.
- If you still cannot use the pointer, restart the computer. You can restart the computer three different ways:
  - Press the **Windows** key, and press the **U** key. When the **Turn off computer** window appears, press the **R** key.
  - Press the **Ctrl+Alt+Delete** keys simultaneously. When the **Windows Task Manager** window appears, press the **Alt** key to highlight the menu bar, and press the ➡ key to select **Shut Down**. Press the **Enter** key, and then press the **R** key.
  - Press and hold the power button. When the computer turns off, wait 10 to 15 seconds then press the power button again to restart the computer.

- If you are using a wireless optical mouse:
  - Confirm that the supplied AA batteries are properly installed.
  - Press the **CONNECT** button on the mouse and the radio frequency receiver to re-establish the connection between the two devices.
  - Verify the radio frequency receiver is free of obstructions that may prevent proper operation.
- Avoid using radio-controlled toys or equipment, CB radios, and other wireless devices in the area near your wireless mouse. These devices may cause interference, causing your mouse to stop working properly.
- Do not place metal furniture near the computer or wireless mouse, as this may create interference, causing your mouse to stop working properly.

Speakers

Why won't my speakers work?

- Make sure the speakers are properly connected and the volume is turned up loud enough to hear sound.
- Your speakers may not be designed for computer use.
- If the speakers have a mute button, set the button to off.
- If the speakers have a volume control, make sure the volume is turned up loud enough to hear sound.
- The speaker volume may have been turned off. Press the Mute button on the keyboard.
- The keyboard also has a volume control, make sure the volume is turned up loud enough to hear sound.
- If you have connected an audio cable to the Headphones jack, disconnect the cable and use the speaker cable that was supplied with the speakers.
- If the speakers require external power, make sure the speakers are connected to a power source. See the manual that came with the speakers for more information.

Why can't I hear sound from my speakers?

- If you are using a program that has its own volume control, make sure the volume control is properly set. See that program's help guide for more information.
- Your speakers may be set to mute, the volume setting may be too low, or the audio option may be disabled.
- The speaker volume may have been turned off. Press the Mute button on the keyboard.
- The keyboard also has a volume control, make sure the volume is turned up loud enough to hear sound.
- Check the volume controls in Windows.
  1. Click **Start** and then **Control Panel**.
  2. Click **Sounds, Speech, and Audio Devices**.
  3. Select the Sound Reality item and change the settings.

Keyboard

What should I do if the keyboard configuration is wrong?

- The language layout of the computer's keyboard is specified on the sticker on the box. If you choose a different regional keyboard when you complete the Windows setup, the key configuration will be mismatched.
- To change the keyboard configuration, follow these steps:
  1. Click **Start** and then **Control Panel**
  2. Click **Date, Time, Language and Regional Options**, and click **Regional and Language Options**.
  3. Change the settings as desired.

Floppy Disks

Why doesn't the Safely Remove Hardware icon appear on the taskbar when the drive is connected?

The computer does not recognize the floppy disk drive. First, make sure the USB cable is properly connected to the USB port. If you need to secure the connection, wait a few moments for the computer to recognize the drive. If the icon still does not appear, follow these steps:

1. Close all programs that were accessing the floppy disk drive.
2. Wait for the LED indicator on the floppy disk drive to turn off.
3. Push the eject button to remove the disk, and disconnect the USB floppy disk drive from the computer.
4. Reconnect the floppy disk drive by inserting the USB connector (with the USB icon facing upward) into the USB port.
5. Restart the computer by clicking **Start**, **Turn Off Computer**, and then **Restart**.

Why is the drive unable to write data to a floppy disk?

- Make sure the floppy disk is properly inserted in the drive.
- If the disk is inserted properly and you are still unable to write data to it, the disk may be full or write-protected. You can either use a floppy disk that is not write-protected or disable the write-protect feature.

Audio/Video

Why can't I use the DV camera recorder?

You may not be able to use the DV camera recorder, and the message DV equipment seems to be disconnected or turned off may appear because the i.LINK cable is not securely plugged into the ports on the computer or camera. Unplug the connectors, and plug them in again. See **Connecting an i.LINK Device** **(page 81)** for more information.

i.LINK is a trademark of Sony used only to designate that a product contains an IEEE1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. See the manual that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Memory Stick Media

Why can't I open my image files?

You may need to reformat your Memory Stick media.

Formatting Memory Stick media erases all data, including music data, previously saved to it. Before you reformat Memory Stick media, back up important data and confirm that the media does not contain files you want to keep.

1. Copy the data from the Memory Stick media onto the computer's hard disk to save data or images.
2. Format the Memory Stick media using the **Memory Stick Formatter** software preinstalled on the computer. For instructions about formatting a Memory Stick media, see the help file on the **Memory Stick Formatter** software.

Why can't I save music files onto my Memory Stick media?

- Copyright protected music cannot be checked out to any Memory Stick media other than MagicGate Memory Stick media.
- Using recorded music requires permission of the copyright holders.
- Sony is not responsible for music files that cannot be recorded from a CD or downloaded from other sources.

Can I copy images from a digital video camera using Memory Stick media?

Yes, and you can view video clips that you have recorded with Memory Stick media-compatible video camera recorders.

Peripherals

What should I do if I cannot connect a USB device?

- If applicable, check the USB device is switched on and using its own power supply. For example, if you are using a digital camera, check the battery is charged. If you are using a printer, check the power cable is connected properly to the AC outlet.
- Try using a different USB port on the computer. The driver could be installed to the specific port you used the first time you connected the device.
- Check the manual provided with the USB device. You may need to install software before you connect the device.
- Try connecting a simple, low-powered device such as a mouse to test that the port is working at all.
- USB hubs may prevent a device from working because of the distribution of power. We recommend you connect the device directly to the computer without a hub.

Support Options

The section contains information on where to go for answers to questions about your computer and the preinstalled software.

Sony Support Information

See the following sources for answers in the sequence listed below.

1 VAIO Computer Documentation

This on-screen **User Guide** (this manual) and the printed **Welcome mat** provide detailed information on how to maximize your computer's capabilities and solve common problems.

2 Program Guides and Help Files

The preinstalled programs on your computer may be supplied with individual help guides. These guides are stored on the hard disk as on-screen Help files. You can find the Help files from the Help menu under the specific program.

3 Operating System Online Support

Your computer comes preinstalled with a Microsoft Windows operating system. For operating system support, you can visit Microsoft customer support at: http://support.microsoft.com/directory/.

4 Sony Computing Support

This service provides instant access to information on commonly encountered problems. Type a description of the problem and the Knowledge Database searches for the corresponding solutions online. You can visit the Sony online support Web site at http://www.sony.com/pcsupport for customers in USA, at http://www.sony.ca/support for customers in Canada, or at http://www.sony.com/lapcsupport for customers in Latin American countries or areas.

5 VAIO Update

When your computer is connected to the Internet, **VAIO Update** automatically notifies you when critical software and security information is posted on the support web site. Click the **VAIO Update** notice to open the VAIO Support web site and view the information.

Program Support Information

Depending on the computer model and particular configuration you purchased, your computer may not include all of the software programs listed below.

Adobe® Photoshop® Elements, Photoshop® Album, Premiere®, Reader®

Adobe Systems Inc.

- For users in USA and Canada
  Web Site http://www.adobe.com/support
  Telephone 800-685-3652

America Online® (Broadband or Dial-Up)

America Online, Inc.

- For users in USA and Canada
  Web Site http://www.aol.com

AOL® Instant Messenger™

America Online, Inc.

- For users in USA and Canada
  Web Site http://www.aim.com

Click to DVD™ software

Sony Electronics Inc.

At the touch of a button, Click to DVD software allows you to automatically burn DVDs from a digital video (DV) device. Create DVDs by capturing video content straight from a DV device or by importing video from stored files — and you can also edit the video. Create DVD photo albums and slide shows with picture files or by importing pictures from a digital still camera. What's more, you can give a professional look to your DVDs by adding chapter menus, backgrounds, and menu screens. You are only a few clicks away from your own DVDs!

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

DVgate Plus™ software

Sony Electronics Inc.

Connect a compatible digital video camera to your computer's i.LINK® port and capture video clips and still images. Edit clips from your video, add new clips, and combine clips into new movie segments. Save your movies back to your digital video camera or in a variety of popular file formats.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

Google Toolbar™

Google, Inc.

- For users in USA and Canada
  Web Site http://toolbar.google.com/help.html

Intel® PROSet

Intel Corporation

- For users in USA and Canada
  Web Site http://www.intel.com/network/connectivity/products/wireless/proset/proset_software.htm

Microsoft® Office Basic Edition, Office Professional Edition, Office Small Business Edition, 60-Day Trial Version of Microsoft® Office 2003

!
The Microsoft Office 2003 60-Day Trial software included with this computer system is intended for evaluation purposes only. The software has been installed and you must activate the software before you can use it. Product activation procedures will be detailed during initial launch of the software; activation requires Internet access. This software has an expiration date of 60 days from date of first use, at which time the software will operate under reduced-functionality mode, limiting end-user options and operations.

Microsoft Corp.

- For users in USA and Canada
  Web Site http://support.microsoft.com

Microsoft® Internet Explorer, Movie Maker, Media Player, Works

Microsoft Corp.

- For users in USA and Canada
  Web Site http://support.microsoft.com

MoodLogic

MoodLogic, Inc.

- For users in USA and Canada
  Web Site http://www.moodlogic.com/support
  E-mail help@moodlogic.com

Netscape® Internet Service

America Online, Inc.

- For users in USA and Canada
  Web Site http://isp.netscape.com/help
  Telephone 866-541-8233

Norton Internet Security™

Symantec Corporation

- For users in USA and Canada
  Web Site http://www.symantec.com/techsupp

Quicken® New User Edition

Intuit Inc.

- For users in USA and Canada
  Web Site http://www.intuit.com/support/quicken/

ROXIO DigitalMedia®

Sonic Solutions

- For users in USA and Canada
  Web Site http://support.sonic.com/

SonicStage® software

Sony Electronics Inc.

The SonicStage jukebox software program gives you all the tools you need to manage music on your computer. SonicStage software sports high-quality digital audio storage, a sleek player skin design, and audio CD burning capability.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

SonicStage® Mastering Studio software

Sony Electronics Inc.

Use SonicStage® Mastering Studio software to record songs from analog records or cassette tapes into your computer and output them to CD-R or CD-RW discs or audio files in WAV format.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

SpySubtract®

InterMute, Inc.

- For users in USA and Canada
  Web Site http://www.intermute.com/support.html

VAIO® Action Setup

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's shortcut keys.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

VAIO® Central

Sony Electronics Inc.

VAIO Central provides a central location that gathers resources to configure your VAIO computer and view your computer's configuration and specifications.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

VAIO Media™ software

Sony Electronics Inc.

VAIO Media™ software brings multimedia to your network, enabling you to share music, video, and still image files between your VAIO® computers. You can set up one or more VAIO computers as "media servers," which store your multimedia files and make them available to other compatible VAIO computers on your wired or wireless network.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

VAIO® Support Central

Sony Electronics Inc.

VAIO Support Central provides an easy to navigate solution to common support needs, such as VAIO Documentation, product specifications, serial number, model name, service tag information, survey, registration, etc.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

VAIO® Update

Sony Electronics Inc.

The VAIO Update utility helps you keep your VAIO® computer up to date by regularly checking the Sony Online Support Web site for important software updates and information for your specific VAIO computer model.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

VAIO® Wireless Utility

Sony Electronics Inc.

The VAIO Wireless Utility walks you through setting up your wireless network connection and offers useful diagnostic tests to help keep your wireless network running smoothly.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

VAIO Zone™ software

Sony Electronics Inc.

VAIO Zone software provides an effortless way to browse and enjoy pictures, music, and video files on your computer, all through an elegant, next-generation interface. You can even enjoy media content stored on other VAIO® computers on your network. On VAIO computer models with a recordable DVD drive, VAIO Zone enables you to record video and slide shows of pictures to DVD. On VAIO computer models with a built-in TV tuner, VAIO Zone includes a complete personal video recorder, enabling you to record TV programs and burn them to DVD.

- For users in USA
  Web Site http://www.sony.com/pcsupport
  Telephone 888-4-SONY-PC (888-476-6972)
- For users in Canada
  Web Site http://www.sony.ca/support
- For users in Latin American countries or areas
  Web Site http://www.sony.com/lapcsupport
  Telephone 888-4-SONY-PC (888-476-6972)

WinDVD® software for VAIO® computers

InterVideo, Inc.

- For users in USA and Canada
  Web site http://www.intervideo.com/jsp/Support.jsp
  Telephone 510-651-0888

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